Partner: AtlasIED
Model: Atmosphere (AZM4/AZM8)
Device Type: Digital Signal Processor

GENERAL INFORMATION

SIMPLWINDOWS NAME:	AtlasIED Atmosphere v1.0 Zone Component
CATEGORY:	DSP
VERSION:	1.0
SUMMARY:	This module controls one specific Zone object on the Atmosphere AZM4 or AZM8 audio processor (henceforth referred to as “device”).
GENERAL NOTES:	N/A
CRESTRON HARDWARE REQUIRED:	Crestron 3-Series & 4-series processors **ONLY**.
SETUP OF CRESTRON HARDWARE:	This module requires the AtlasIED Atmosphere v1.0 Command Processor in order to operate. Please read the help files associated with that module.
VENDOR FIRMWARE:	N/A
VENDOR SETUP:	N/A

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800.237.2041 / 201.767.3400

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PARAMETER MATRIX

Although the Atmosphere devices are technically “fixed architecture”, many of the controllable points on the device are “virtual” and do not directly correspond with a static/physical component on the device (such as an input or output). For example, a source can be made up of more than one input or a mix can be made up of more than one source. In order to allow for controlling these “virtual” control points, AtlasIED has provided a “parameter matrix” (henceforth referred to as “matrix”) directly on the device which is used for this purpose. It is located in Settings → Third Party Control → Message Table.

Below is an example of the matrix from the included demo .azm configuration. This will be used as a reference later in this document. Every matrix will be different and will be created automatically and dynamically as you change the components in your configuration. You will need to reference this matrix on your actual device in order to determine the control components used in the program and the parameters on them.

Names	Gain	Meter	Mute	Name	Source	Combine	Misc
Sources							
Room A Mic	SourceGain_0	SourceMeter_0	SourceMute_0	SourceName_0	–	–	–
Room B Mic	SourceGain_1	SourceMeter_1	SourceMute_1	SourceName_1	–	–	–
Mixes							
Mic Mix	MixGain_14	MixMeter_14	MixMute_14	MixName_14	–	–	–
Zones							
Room A	ZoneGain_0	ZoneMeter_0	ZoneMute_0	ZoneName_0	ZoneSource_0	–	–
Room B	ZoneGain_1	ZoneMeter_1	ZoneMute_1	ZoneName_1	ZoneSource_1	–	–
Groups							
AB Combined	GroupGain_0	GroupMeter_0	GroupMute_0	GroupName_0	GroupSource_0	GroupCombine_0	–
Messages							
Emergency Alert	–	–	–	MessageName_0	–	–	PlayMessage_0
Fire Alarm	–	–	–	MessageName_1	–	–	PlayMessage_1
Routines							
All Hands Meeting	–	–	–	RoutineName_0	–	–	RecallRoutine_0
Holiday Shutdown	–	–	–	RoutineName_1	–	–	RecallRoutine_1
Scenes							
Startup	–	–	–	SceneName_0	–	–	RecallScene_0
Shutdown	–	–	–	SceneName_1	–	–	RecallScene_1
GPO Presets							
Amp Off	–	–	–	GPOPresetName_0	–	–	RecallGPOPreset_0
Amp On	–	–	–	GPOPresetName_1	–	–	RecallGPOPreset_1
Bell Schedule							
–	–	–	–	–	–	–	TodaysBellSchedule
Monday	–	–	–	BellScheduleName_0	–	–	–
Wednesday	–	–	–	BellScheduleName_1	–	–	–
Friday	–	–	–	BellScheduleName_2	–	–	–
GPO Status							
–	–	–	–	–	–	–	GPOState_0
–	–	–	–	–	–	–	GPOState_1

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PARAMETERS

Command_Processor_ID	Setting to indicate the ID for the command processor that this module will register itself with.
Parameter_Index	Each control point on the device will be assigned an index automatically/dynamically which can be found on the matrix (as shown on the previous page). The leftmost column of the matrix has a listing of all the controllable components. Each component row contains all the available control points for that particular control. At the end of each of these names is a number. This number is the Parameter Index. For example, if this control component is meant to control the zone called “Room A” on the aforementioned matrix, you will see that the Parameter Index used all along the row for “Room A” is 0. Enter 0 for this setting on the control module. This is how the control module knows which component to control.
Step_Size_dB	Setting to indicate the dB offset to use when incrementing or decrementing the level.

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CONTROL

Level_Up	D	Increment the volume level on the rising edge. Volume will be incremented every .5 seconds at the step size configured on the Step_Size_dB parameter. Stop incrementing the volume level on the falling edge.
Level_Down	D	Decrement the volume level on the rising edge. Volume will be incremented every .5 seconds at the step size configured on the Step_Size_dB parameter. Stop decrementing the volume level on the falling edge.
New_Level_dB	A	Sets the value to be set using Set_New_Level_dB signal (-80 to 0). This is a **signed dB level**. **Note: this input is not designed to be used with a Ramp symbol in SIMPL Windows. It is only designed to be used for preset levels.**
Set_New_Level_dB	D	Pulse to send the volume entered in the New_Level_dB input. This will allow preset values to be sent to the device.
New_Level_Percent	A	Sets the value to be set using Set_New_Level_Percent signal (0 to 65535). This is an **unsigned level**. **Note: this input is not designed to be used with a Ramp symbol in SIMPL Windows. It is only designed to be used for preset levels.**
Set_New_Level_Percent	D	Pulse to send the volume entered in the New_Level_Percent input. This will allow preset values to be sent to the device.
Mute_On	D	Mute the volume on the rising edge of this signal.
Mute_Off	D	Unmute the volume on the rising edge of this signal.
Mute_Toggle	D	Invert the volume mute state on the rising edge of this signal.
New_Source	A	Sets the source to be set using Set_New_Source signal. **Note the value passed in here should correspond with the parameter index of the source or mix you would like to set. Use -1 (65535) to set the source to None. An Analog Init is recommended in your SIMPL program to set the value according to the rules above.**
Set_New_Source	D	Pulse to select the source entered in the New_Source input.
Poll	D	Though the module will automatically subscribe for all relevant feedback, this signal has been provided as a convenience in case you would like to poll manually (or if subscriptions fail for any reason). Pulse to poll for the current state.
Enable_Metering	D	Turn on metering on the rising edge of this signal. **Note, turning on metering will cause an influx of messages to be received from the device. Depending on the number of meters currently active, this can quickly overwhelm the processor and cause sluggishness, crashing or otherwise unexpected behavior. It is HIGHLY recommended to use this signal with caution, and if used, to do so infrequently and for brief periods of time. It is recommended to use the web interface on the device whenever possible to view meters.**

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FEEDBACK

Is_Initialized	D	Signal is high to indicate the module has successfully received all required responses from its initializing queries.
Zone_Name	S	Serial signal reflecting the name of the zone as programmed on the devices web interface.
Current_Level_dB	A	Analog volume level value. This is the signed dB value (-80 to 0).
Current_Meter_dB	A	Analog meter value. This is the signed dB value (-80 to 0).
Current_Level_Percent	A	Analog volume level value. This is the scaled unsigned value (0 to 65535).
Current_Meter_Percent	A	Analog meter value. This is the scaled unsigned value (0 to 65535).
Is_Muted	D	Signal is high to indicate the volume is currently muted.
Current_Source	A	Analog value indicating the current source for the zone. **Note the value returned here will correspond with the parameter index of the source or mix that has been set. -1 (65535) will be returned if the source is set to None. An Analog Equate is recommended in your SIMPL program to parse the value returned according to the rules above.**
Is_Grouped	D	Signal is high to indicate the zone is currently part of an active group.
Is_Metering_Enabled	D	Signal is high to indicate that metering is currently enabled.

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TESTING

OPS USED FOR TESTING:	CP3: 1.8001.4666.20418 MC4: 2.7000.00031
SIMPL WINDOWS USED FOR TESTING:	4.1800.14
CRES DB USED FOR TESTING:	210.0500.001.00
DEVICE DATABASE:	200.14000.001.00
SYMBOL LIBRARY USED FOR TESTING:	1156
SAMPLE PROGRAM:	AtlasIED Atmosphere v1.0 Demo IP CP3
REVISION HISTORY:	v1.0 – Initial Release

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