

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



## GENERAL INFORMATION

**SIMPLWINDOWS NAME:** AtlasIED Atmosphere v1.0 Command Processor

**CATEGORY:** DSP

**VERSION:** 1.0

**SUMMARY:** This module controls TCP/IP communication with an Atmosphere AZM4 or AZM8 audio processor (henceforth referred to as "device").

This module acts as the primary communication link to a particular device. Multiple instances of this module can be included in the Crestron program to communicate with different devices on the network.

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 per program. 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 have a virtually unlimited number of control modules report to a single instance of a command processor.

Two .azm files (Demo\_Config\_AZM4.azm / Demo\_Config\_AZM8.azm ) have been created for Crestron testing purposes. The .azm file corresponding to your device model **MUST** be loaded to the device for proper operation of the demo program. Note if your device is an AZM4, you will need to change the Parameter Index of the included Mix component to 8 instead of 14.

**GENERAL NOTES:**

Once the processing module has determined that it is communicating with the device, 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.

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 state for various room configurations, it is best to use the scene/routine feature built into the device. Trying to automate a scene/routine using SIMPL logic will add a lot of traffic on your system, and may cause adverse effects.

You should wait for any and all processing modules to set "Is\_Initialized" to high before attempting to control the device.

You may need to enable the Third Party Device control API on the device in order for control to work. To do this, navigate to Settings → Third Party Control → General and toggle the Enable switch on.

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**GENERAL INFORMATION** *continued*

<b>CRESTRON HARDWARE REQUIRED:</b>	Crestron 3-Series & 4-series processors <b><u>ONLY</u></b> .
<b>SETUP OF CRESTRON HARDWARE:</b>	N/A
<b>VENDOR FIRMWARE:</b>	N/A
<b>VENDOR SETUP:</b>	N/A

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## PARAMETERS

**Command\_Processor\_ID**

Setting to indicate the ID for a particular processing module. Each processing module controls a single device. 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\_Address**

Setting to indicate the IP address of the device.

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## CONTROL

<b>Connect</b>	D	Establish communication with the device on the rising edge of this signal. This signal is provided as a convenience should it be necessary to manually manage connection and disconnection with the device. Connection will automatically occur upon program start.
<b>Disconnect</b>	D	Break communication with the device on the rising edge of this signal.
<b>Reinitialize</b>	D	Re-establish communication with the device on the rising edge of this signal. This signal effectively performs a disconnect followed by a connect. This signal is provided as a convenience should it be desired to reinitialize at any point. Initialization will automatically occur upon connection to the device.
<b>Enable_Debug</b>	D	Set high to enable internal trace messages to be printed in SIMPL Debugger. These messages may be useful while debugging to see what processes are occurring within the module. <b>Note it is highly recommended to leave this signal low unless actively debugging as it causes much additional signal traffic in Debugger.</b>
<b>Enable_Passback</b>	D	Set high to enable passback functionality. If enabled, all responses from the Atmosphere processor will be sent out of the Passback feedback signal. This feature is useful should you wish to extend the functionality of the module and perform additional operations in your program based on the responses from the device.
<b>Passthru</b>	S	This signal is used to manually send commands to the device. Any serial data input on this signal will be added to the module's internal command queue and sent to the device. This signal is useful for troubleshooting purposes, sending test commands, or extending the control functionality to commands supported by the device but not supported by the module.

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## FEEDBACK

<b>Is_Communicating</b>	D	Set to high to indicate that communication has been established with the device. Once communication has been established, the module will attempt to initialize automatically.
<b>Is_Initialized</b>	D	Set to high when all registered control modules have successfully indicated that they have received the required responses to all their queries.
<b>Is_Debug_Enabled</b>	D	Set to high to indicate that internal debugging is currently enabled. Internal debugging messages will be printed in red in SIMPL Debugger.
<b>Is_Passback_Enabled</b>	D	Set to high to indicate that passback is enabled. All messages received from the device, in addition to being processed by the module, will also be sent out the Passback serial signal for additional processing in the SIMPL program, if desired.
<b>Passback</b>	S	Serial signal indicating the last response received from the device, if Is_Passback_Enabled is high.

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**TESTING**

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