

Crestron Module Documentation

for an

ATLONA

AT-UHD PRO3-Universal Matrix Switcher

Module developed for Atlona by Front Side Solutions.

www.frontsidesolutions.com

General Information:

Notes	
SIMPLWINDOWS NAME:	Atlona AT-UHD-PRO3-Universal r1.0.umc
CATEGORY:	Matrix Switch
VERSION:	r1.0
SUMMARY:	This module controls Power, Switching, Presets and Volume levels on the Atlona AT-UHD-PRO3 Series Matrix Switches. It also has advanced Preset functionality to allow more flexibility over the Basic module and adds in the ability to use ComPort Extender Modules which allow device control using the RS-232 ports on the switcher's receiver units.
GENERAL NOTES:	<p>This module controls Power, Switching, Presets and Volume levels on the Atlona AT-UHD-PRO3 Series Matrix Switches. This module has built in queuing for use of expansion ComPort modules and future expansion modules. This is a "Universal" module that will work with the 4x4 switcher up to the 16x16 size model, therefore the user must only use signals and input ranges relative to their switch.</p> <p>Note: It is recommended when using IP control to send the "Broadcast off" command via telnet or RS232 from a terminal. This decreases latency on responses and provides for smoother volume ramping. See the product manual for details on this command.</p> <p>This module provides for up to (16) "expansion modules" to be used to expand the functionality of the suite. This allows for using the internal queueing and pausing mechanisms in place for polling. This is to allow programmers an easy, non-intrusive way to expand the functionality of this module to include things like input level volume controls, or EQ controls, etc. that are not part of this modules feature set.</p> <p>This module should only be paired with the "Atlona Universal 2-way ComPort Gen 3 r0.0" Comport expansion module or newer.</p> <p>NOTE: All Digital inputs are buffered inside the module.</p>
CRESTRON HARDWARE REQUIRED:	ST-COM, C2-COM, C2ENET-1/2
SETUP OF CRESTRON HARDWARE:	Unit Default is RS232 Baud: 115,200 Parity: N Data Bits: 8 Stop Bits: 1.

Parameters:

Parameter Name	Notes
Preset Save Hold Time	Time in Seconds that Preset1~8 should be held before the preset is saved.
Rx \$ Span	This parameter is only needed when using the experimental 1.5-way ComPort expansion module. This helps account for latency when strings are returned from the switcher spanning multiple logic waves.

Typically this would be set to (1) tick longer than the number of logic waves your return string spans, but as it is experimental, you may have to play with it.

Control

Signal Name	Type	Notes
Power_On	D	Pulse to turn unit on.
Power_Off	D	Pulse to turn unit off.
Enter(Take)	D	Pulse to send switch commands. May be latched High to allow switches to happen automatically if VideoOut1~16 is changed.
Out1~20	A	Set to value of 0~16 to represent the input to be sent to the output.
One_to_One	D	Pulse to reset all inputs to corresponding outputs (i.e. In1 to Out1, In2 to Out2, etc.).
Preset1~8	D	Pulse to recall matrix presets. Hold for time specified in "Preset Save Hold Time" to save a preset. Presets are stored in the unit, not in the Crestron processor. Presets can be set from the front panel of the unit.
Poll_Enable	D	Pulse for a quick poll of the switcher. If latched, switcher will be polled every (5) seconds for changes if the unit is off, and every (60) seconds if the unit is on. Module is updated based on real-time responses to commands sent to the unit, so if you do not expect the user to access the front panel to make switching changes, or if the front panel is locked out, polling beyond the initial sync is optional.
Device_Rx_\$	S	Connect to RS232 receive.
VolOut1~6_+/-	D	Pulse to increment /decrement the master volume up or down for the indicated output. If held for the period defined in parameter, will ramp volume up or down at the repeat rate defined in the parameter.
VolOut1~6_Lvl	A	Use to set volume directly to a level. Supported range is -90d to +10d, corresponds directly with the dB level. Note this may be changed by Atlona to a range of -80d to +10d in a future firmware release to synchronize it with other products. We advise early adopters to use this range if implementing this control so that it is not broken by a firmware update later; -80dB should not be audible.
VolOut1~6_Mute_On/Off	D	Pulse to mute/unmute audio for particular output.
Preset1~8_Recall	D	Pulse to recall matrix presets. Holding will not save preset, this is recall only
Preset1~8_Save	D	Pulse to save matrix presets. Holding is not required. This is to allow programmers to use different methods of saving presets rather than the default Press And Hold functionality.
Fm_ComPort_Mod1~20_Tx_\$	S	Allows for feeding comport Expansion Modules into this module. Refer to the switchers documentations for which zone correlates to which output. Note, the sequence of "\r" (without quotes) is the only known sting values that cannot be sent, as this is the terminator for the device protocol.

Fm_Expansion_Mod1~16_Tx_\$	S	Connect to the output of the future expansion modules.
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Feedback

Signal Name	Type	Notes
Power_On_Fb	D	Unit is powered On feedback.
Power_Off_Fb	D	Unit is powered Off feedback.
Out1~16_Fb	A	Feedback representing the input that each output is at.
Preset1~8_Fb	D	Momentary feedback indicating that a Preset was recalled.
Preset_Saved_Fb	D	Latch High for (1) second to indicate that a preset has been saved.
Device_Tx_\$	S	Connect to RS232 transmit.
Preset1~8_Recall_Fb	D	Momentary feedback indicating that a Preset was recalled.
Preset1~8_Save_Fb	D	Momentary feedback indicating that a Preset was saved.
To_ComPort_Mod1~20_Rx_\$	S	Sends return strings to comport modules. See above for details on zoning.
To_ComPort_Mod1~20_Enable	D	Connect to ComPort Module enables to turn them on when this module is ready to process their strings.
To_Expansion_Mod1~16_Poll_Pulse	D	Provides a pulsed output for expansion modules controlled by the master poll process.

Testing

Notes	
OPS USED FOR TESTING:	CP3N: 1.010.0060
SIMPL WINDOWS USED FOR TESTING:	4.02.65.01
DEVICE DB USED FOR TESTING:	65.00.002.00
CRESTRON DB USED FOR TESTING:	51.00.003.00
SAMPLE PROGRAM:	Atlona AT-UHD-PRO3-Universal Demo r1.0.smw
DEVICE FIRMWARE USED FOR TESTING:	Pre-release

Revision History

Date	Initials	Comments
06.17.2015	CDR	V0.0 Initial Release
08.20.2015	CDR	V1.0 Added support for volume controls and 2-way comports modules.