



CueServer Control Modules Module Application Guide

Description

This suite of modules supports the Interactive Technologies CueServer series of DMX controllers via UDP/IP and TCP/IP communications. Level control, cue recall, cue saving and channel feedback, relay outputs, and CueServer buttons are available.

CueServer Poll Levels v1

This module allows a Cue Server to be polled for current level feedback across all 512 channels.

CueServer Channel Level Set v1

This module allows any individual channel on the CueServer to be set to a specific level input value. The input can be ramped or directly set to a level.

CueServer Cue Recall and Save v1

This module allows any cue to be recalled or saved to the CueServer. In addition to basic save and recall functions, fade and follow times can be set for a cue to be saved. When a cue is saved, all 512 channels are saved in the cue.

CueServer Relay Outputs v1

This module allows any of the eight digital relay outputs on a CueServer to be controlled. There are eight basic functions that are supported by the CueServer. These functions are detailed below.

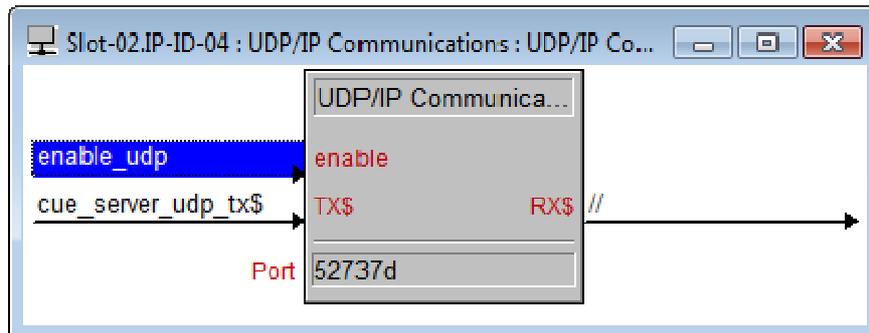
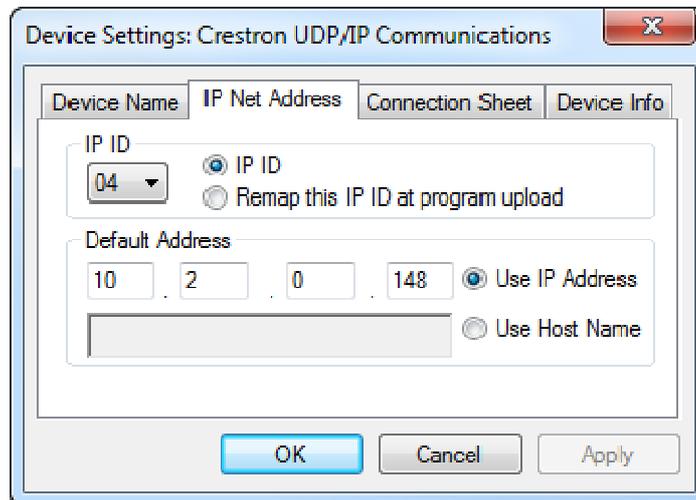
CueServer Buttons v1

This module allows triggering button functions and reading button status.

Compatibility			Processor Requirements	

Ethernet Configuration Information

This module requires one UDP/IP client connection to the CueServer. Set the Default Address of the UDP/IP Communications client to either the IP address or the host name (if applicable) of the CueServer. The default UDP port of a CueServer is set to port 52737 (52737d in the Port parameter). The connection to the CueServer should be kept open for any communications between the Crestron Processor and the CueServer, which is driven by the enable digital input.



Module Application

Successful application of this module assumes working knowledge of DMX control systems in general. It also assumes that you are familiar with the CueServer series of web controls. As the CueServer series can support multiple types of equipment setups, it is important that you understand the configuration of these setups and the terminology of the equipment involved.

Note about Polling for current level feedback

This module supports the usage of polling for current feedback of all 512 channels of the CueServer. However, it is not recommended to continuously poll for updated information as this is a very intensive request on the Crestron processor for a brief period of time. Furthermore, while this module polls for information, UDP commands from the CueServer Channel Level Set v1 will **not be generated**. Please see the demo program for the correct way to program this.

Button Feedback

Included in the module distribution is a module for CueServer buttons. This module is used to trigger buttons programmed in the CueServer and for button feedback. The feedback state of CueServer buttons is dependent on how the "Indicator" section has been programmed via the web control.

CueServer Main Console Cue List Groups Stage Keypad Triggers

Edit Button 1 (Station 1, Button 1)

Button Name: Channel 10 Toggle

Actions

Function: Channel Toggle

Channel: 10

Level: 100 %

Fade Time: 0.0

Hold to Cycle:

Save Level:

On Action (optional): ?

Off Action (optional): ?

Indicator

Function: Channel At 100%

On Color:

Off Color:

Save Delete Cancel

See the example to the left. In this example, we have set button 1 up as toggle. In this configuration when the button is pressed, it will toggle Channel 10 between 100% and 0%. The Indicator feedback at the bottom of the page is set to "Channel At 100%". When the channel is at 100% the button will feedback will be high.

There are many other ways to program buttons, and if you have any questions regarding button programming please contact Interactive Technologies.

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Supported CueServer Controllers

This module will support any of the CueServer series family of controllers such as: CueServer Pro (CS-800), CueServer Mini (CS-810), CueServer Express (CS-816), and CueServer Pro DIN (CS-840).

Additional information on the hardware connections and setup can be found in Interactive Technologies' CueServer User Manual Doc. D0420. It can also be found at: <http://interactive-online.com/products/cueserver/downloads>.

Signal and Parameter Descriptions

Bracketed signals such as “[signal_name]” are optional signals

CueServer Poll Levels v1 I/O:

DIGITAL INPUTS

poll_levels.....polls the CueServer for current feedback of all 512 levels.

ANALOG INPUTS

This module does not utilize any analog inputs.

SERIAL INPUTS

This module does not utilize any serial inputs.

DIGITAL OUTPUTS

polling_busy_fb.....indicates if the CueServer is currently being polled. No commands should be sent to the CueServer while it is being polled.

ANALOG OUTPUTS

channelX_fbwhere X is the current channel (from 1 to 512). This is the level of an individual channel in the range of 0-100% (0d - 65535d).

SERIAL OUTPUTS

This module does not utilize any serial outputs.

PARAMETERS

IP Address.....the IP Address of the CueServer.

HTTP Port.....the HTTP Port of the CueServer. This is defaulted to a value of 80d.

CueServer Channel Level Set v1 I/O:

DIGITAL INPUTS

polling_busyprevents this module from being run if the CueServer is currently being polled. This signal should be connected to the polling_busy_fb signal from the CueServer Poll Levels v1 module.

ANALOG INPUTS

channel_level_input.....sets the level of an individual channel in the range of 0-100% (0d - 65535d). The new level is set whenever this signal is changed.

SERIAL INPUTS

This module does not utilize any serial inputs.

DIGITAL OUTPUTS

This module does not utilize any digital outputs.

ANALOG OUTPUTS

This module does not utilize any analog outputs.

SERIAL OUTPUTS

udp_tx\$the command string that is sent to the CueServer. This should be connected directly to the TX\$ serial input of the UDP/IP Communications Block that is connected to the CueServer.

PARAMETERS

Channel Numberthe number of the channel that will have its level changed.

CueServer Cue Recall and Save v1 I/O:

DIGITAL INPUTS

cue_recallrecalls an individual cue. The cue that is recalled is determined by the cue_number analog input.

cue_savesaves an individual cue. The cue that is saved is determined by the cue_number analog input.

ANALOG INPUTS

cue_numberthe number of the cue to be saved or recalled. This number is given as the cue number multiplied by a factor of ten. For example, if cue number 2.3 was to be recalled, this signal should have a value of 23d. This signal range is valid from 0d to 64999d (the maximum number of cues that can be saved by the CueServer).

fadethe fade time (in tenths of seconds) of the cue to be saved. For example, if the fade time of a cue is set to 7.8 seconds, this signal should have a value of 78d. This signal range is valid from 0d to 64999d (the maximum length of time that the fade time can be set to by the CueServer).

followthe follow time (in tenths of seconds) of the cue to be saved. For example, if the follow time of a cue is set to 0.9 seconds, this signal should have a value of 9d. This signal range is valid from 0d to 64999d (the maximum length of time that the follow time can be set to by the CueServer). If the follow time is set to 0 seconds (0d), the following cue in the cue list will not play unless it is recalled (this is the default behavior of the CueServer).

SERIAL INPUTS

This module does not utilize any serial inputs.

DIGITAL OUTPUTS

This module does not utilize any digital outputs.

ANALOG OUTPUTS

This module does not utilize any analog outputs.

SERIAL OUTPUTS

udp_tx\$the command string that is sent to the CueServer. This should be connected directly to the TX\$ serial input of the UDP/IP Communications Block that is connected to the CueServer.

PARAMETERS

This module does not utilize any parameters.

CueServer Relay Outputs v1 I/O:

DIGITAL INPUTS

This module does not utilize any digital inputs

ANALOG INPUTS

[relayX]where X is the relay number to be controlled. The valid range for this analog value is 0d to 7d. The output state of the relay changes whenever the analog value is changed. The functionality of the relay is determined by the analog value that is sent. The following table shows the possible values of each output and how it affects its state:

- Value 0 = OFF
- Value 1 = ON
- Value 2 = Slow Flash
- Value 3 = Slow Flash, Reverse
- Value 4 = Fast Flash
- Value 5 = Fast Flash, Reverse
- Value 6 = Wink
- Value 7 = Wink, Reverse

SERIAL INPUTS

This module does not utilize any serial inputs.

DIGITAL OUTPUTS

This module does not utilize any digital outputs.

ANALOG OUTPUTS

This module does not utilize any analog outputs.

SERIAL OUTPUTS

udp_tx\$the command string that is sent to the CueServer. This should be connected directly to the TX\$ serial input of the UDP/IP Communications Block that is connected to the CueServer.

PARAMETERS

This module does not utilize any parameters.

CueServer Buttons v1 I/O:

DIGITAL INPUTS

poll_buttonspulse to query the status of all 512 buttons.

[button_001] - [button_512]pulse to initiate the function programmed in the CueServer at the assigned button.

ANALOG INPUTS

port.....set to the TCP-IP port number used to control the CueServer.

SERIAL INPUTS

This module does not utilize any serial inputs.

DIGITAL OUTPUTS

[button_001_fb] - [button_512_fb]shows the status of each button.

ANALOG OUTPUTS

This module does not utilize any analog outputs.

SERIAL OUTPUTS

udp_tx\$the command string that is sent to the CueServer. This should be connected directly to the TX\$ serial input of the UDP/IP Communications Block that is connected to the CueServer.

PARAMETERS

This module does not utilize any parameters.

Support

This module is supported by ControlWorks Consulting, LLC. Should you need support for this module please email support@controlworks.com or call us at 440-449-1100. ControlWorks normal office hours are 9 AM to 5 PM Eastern, Monday through Friday, excluding holidays.

Before calling for support, please ensure that you have loaded and tested operation using the included demonstration program and touchpanel(s) to ensure that you understand the correct operation of the module. It may be difficult for ControlWorks to provide support until the demonstration program is loaded.

Updates, when available, are automatically distributed via Email notification to the address entered when the module was purchased. In addition, updates may be obtained using your username and password at <http://www.controlworks.com/customerlogin.aspx>.

Distribution Package Contents

The distribution package for this module should include:

CueServer Module Help v1.pdf	this help file
cueserver_poll_levels_v1.umc	Crestron user module to insert in program
cueserver_channel_level_set_v1.umc	Crestron user module to insert in program
cueserver_cue_recall_and_save_v1.umc.....	Crestron user module to insert in program
cueserver_relay_outputs_v1.umc.....	Crestron user module to insert in program
cueserver_buttons_v1.umc	Crestron user module to insert in program
cueserver_engine_v1.usp.....	Crestron SIMPL+ for use in the above module
cueserver_engine_v1.ush.....	Crestron SIMPL+ for use in the above module
cueserver_button_engine_v1.usp.....	Crestron SIMPL+ for use in the above module
cueserver_button_engine_v1.ush.....	Crestron SIMPL+ for use in the above module
cueserver_demo_v1.vtp.....	example touchpanel (TSW-1050)
cueserver_demo_v1.smw.....	sample program for a MC3

Revision History

V1 caleb@controlworks.com 2014.10.23

- first release of version
- supports polling of CueServer feedback
- supports setting channel values
- supports recalling cues
- supports saving cues with fade and follow times
- supports control of digital relay outputs
- supports control and feedback of buttons

Development Environment

This module version was developed on the following hardware and software. Different versions of hardware or software may or may not operate properly. If you have questions, please contact us.

CueServer Hardware	Software Version
CueServer Mini (CS-810)	5.2.5
Hardware	Firmware Version
Crestron MC3 Processor	1.008.0040
Software	Software Version
Crestron SIMPL Windows	4.02.38
Crestron Vision Tools Pro-e	5.4.17
Crestron Database	45.00.002.00
Device Database	56.02.003.00

ControlWorks Consulting, LLC Module License Agreement

Definitions:

ControlWorks, *We*, and *Us* refer to ControlWorks Consulting, LLC, with headquarters located at 701 Beta Drive, Suite 22 Mayfield Village, Ohio 44143-2330. *You* and *Dealer* refer to the entity purchasing the module. *Client* and *End User* refer to the person or entity for whom the Crestron hardware is being installed and/or will utilize the installed system. *System* refers to all components described herein as well as other components, services, or utilities required to achieve the functionality described herein. *Module* refers to files required to implement the functionality provided by the module and may include source files with extensions such as UMC, USP, SMW and VTP. *Demo Program* refers to a group of files used to demonstrate the capabilities of the Module, for example a SIMPL Windows program and VisionTools Touchpanel file(s) illustrating the use of the Module but not including the Module. *Software* refers to the Module and the Demo Program.

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Provision of Support

We provide limited levels of technical support only for the most recent version of the Module as determined by Us. We do not provide support for previous version of the module, modifications to the module not made by Us, to persons who have not purchased the module from Us. In addition, we may decline to provide support if the Demo Program has not been utilized. We may withdraw a module from sale and discontinue providing support at any time and for any reason, including, for example, if the equipment for which the Module is written is discontinued or substantially modified. The remainder of your rights and obligations pursuant to this license will not be affected should ControlWorks discontinue support for a module.

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You may not decrypt (if encrypted), reverse engineer, modify, translate, disassemble, or de-compile the Module in whole or part. You may modify the Demo Program. In no event will ControlWorks Consulting, LLC be liable for direct, indirect, incidental or consequential damages resulting from You modifying the Software in any manner.

Indemnification/Hold Harmless

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