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Zigen HX-88
HDMI Matrix Switch Serial Driver

Contents

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Introduction

The ZIGEN HX-88 Matrix Switcher is a high performance HDMI matrix switcher designed for applications where routing of high resolution digital video signals are required. The HX-88 Matrix switch is HDMI 1.3c compatible and supports resolutions up to 1920x1200 and HDTV 1080p/60. The HX-88 also ensures simultaneous distribution of any input source signal to one or more compliant displays (one-to-one / one-to-many combination).

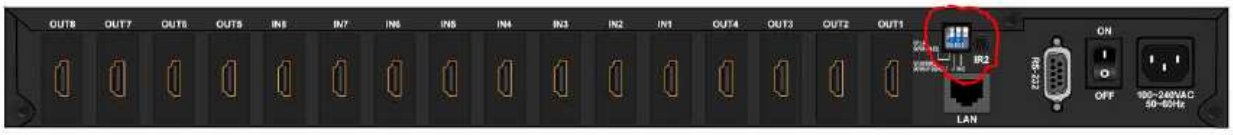
HX-88 matrix switchers are ideal for use in bars, restaurants, commercial, medical, military, government and residential environments where distribution of high resolution, digital video signals are needed and digital pathway is essential for maintaining the highest possible image quality from all sources.

The Extra Vegetables driver is available free to Control4 dealers. No activation code is required.

Setup and Test the Zigen Unit

Before you attempt connection to Control4 you must set up and test the Zigen matrix. You should confirm that the switch works as expected with both the front panel buttons and the supplied IR remote control.

The driver is a serial driver and you must set DIP switch one on the back of the unit to the down position in order to enable serial control



Now connect the Zigen HX-88 to a spare serial port on your Control4 controller.

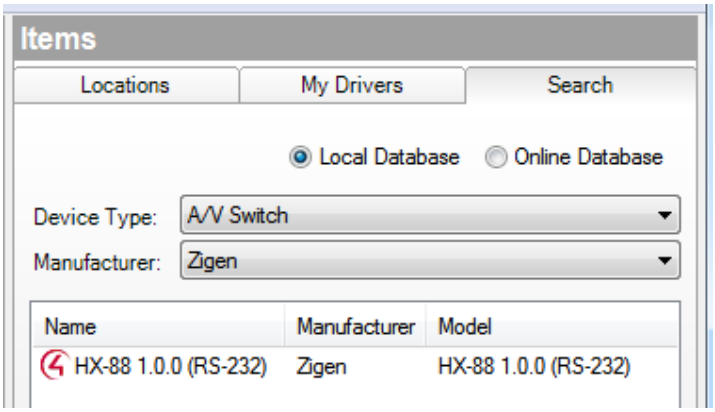
Test before you install

You should test this driver with Control4 in your office or shop before you attempt to install on site.

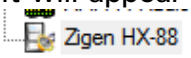
If you have problems please create a support ticket via our website at www.extravegetables.com/helpdesk.

Add the driver to your project

Copy all the .c4i files from the zip package to the My Documents – Control4 - Drivers folder.
Open Composer
You can then find the driver under Device Type – **AV Switch** --, Manufacturer **Zigen**.



It will appear as AV Switch as

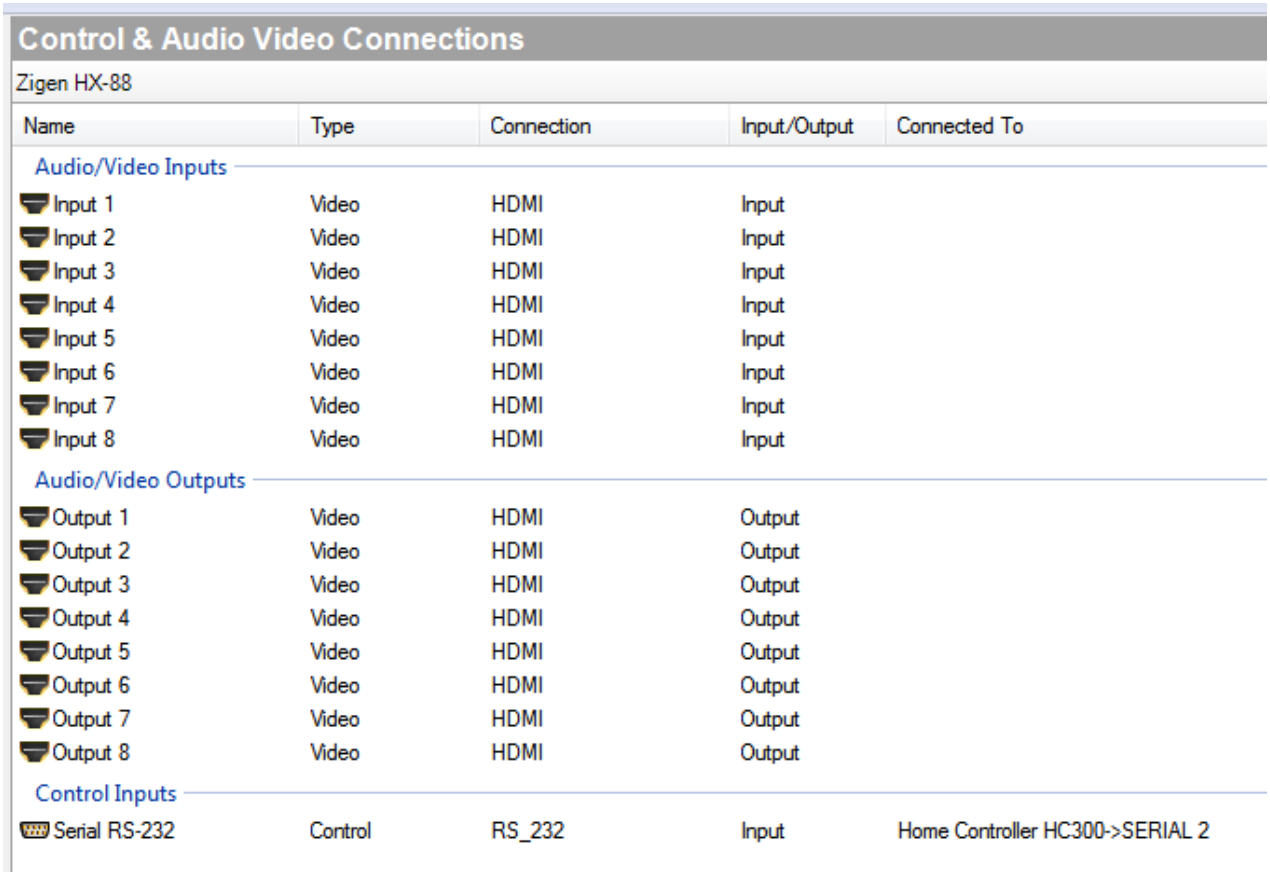


Configuring the Driver

The driver now needs to be set up to work with the system.

Make Your Connections

With everything set up you can now make the connections to the switch. This is all standard Control4 practice.



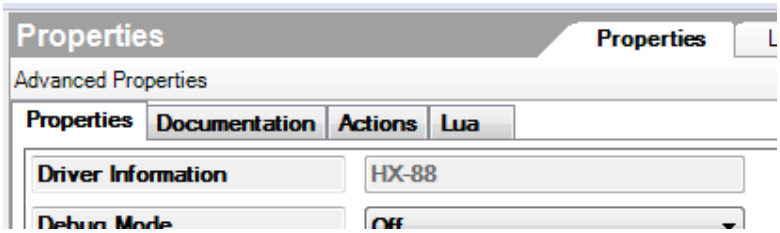
Name	Type	Connection	Input/Output	Connected To
Audio/Video Inputs				
Input 1	Video	HDMI	Input	
Input 2	Video	HDMI	Input	
Input 3	Video	HDMI	Input	
Input 4	Video	HDMI	Input	
Input 5	Video	HDMI	Input	
Input 6	Video	HDMI	Input	
Input 7	Video	HDMI	Input	
Input 8	Video	HDMI	Input	
Audio/Video Outputs				
Output 1	Video	HDMI	Output	
Output 2	Video	HDMI	Output	
Output 3	Video	HDMI	Output	
Output 4	Video	HDMI	Output	
Output 5	Video	HDMI	Output	
Output 6	Video	HDMI	Output	
Output 7	Video	HDMI	Output	
Output 8	Video	HDMI	Output	
Control Inputs				
Serial RS-232	Control	RS_232	Input	Home Controller HC300->SERIAL 2

You will find input and output HDMI connectors for each of the eight inputs and outputs. Connect these to the devices and screens to match the physical connections on the switch.

We suggest that before you make the serial connection in Composer that you ensure that the physical serial cable is connected and the Zigen HX-88 is switched on. You should use the serial cable provided with the HX-88.

If you do this it allows the driver to immediately query the HX-88 for its status and provide you with confirmation that the connection is good.

Once you have made the connection the Driver Information box will show the name of the switch. This will be HX-88 as shown unless you have changed the name.



If the name is shown then you know the driver is successfully communicating with the switch. If it is not you should check both your physical and Composer connections.

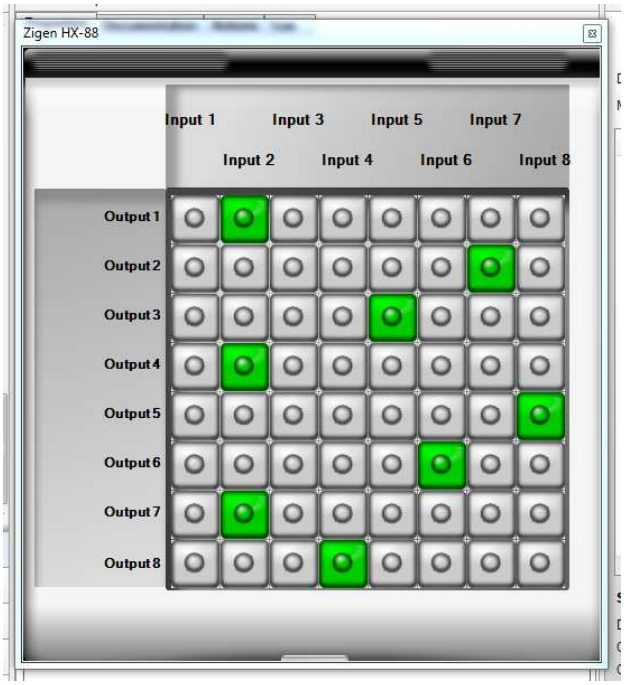
Test the Driver

You can now test the driver. If you highlight the matrix in System Design and double click it the control window will appear.

This will show the current Input to Output combinations highlighted in Green. You can now control the matrix from this screen. The green highlight will move to the new input-output combination when the driver receives confirmation from the switch that the switch has been made.

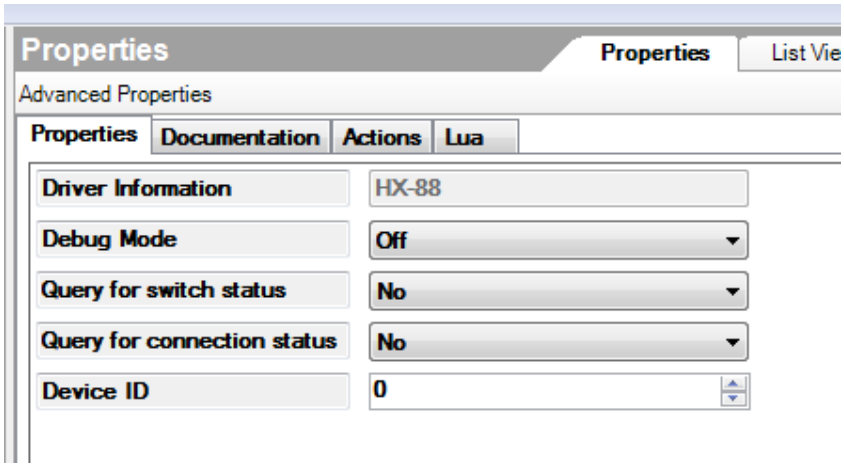
You will also be able to follow the switch changes on the front panel of the switch.

Once you are satisfied that all is working correctly you can move onto making the optional settings on the driver.



Properties

There are a number of optional settings on the driver properties page as follows:



Debug Mode

This should only be enabled if requested by Extra Vegetables technical support. It shows diagnostic information on the Lua tab

Query for switch status

The HX-88 does not automatically inform the driver of any changes to the input-output combinations made from the front panel or IR control. If you want the driver to check to see if any such changes occur then you can enable this function. The driver will poll the switch every 15 seconds. Any changes detected will be reflected in the standard Control4 variables for the switch.

Query for connection status

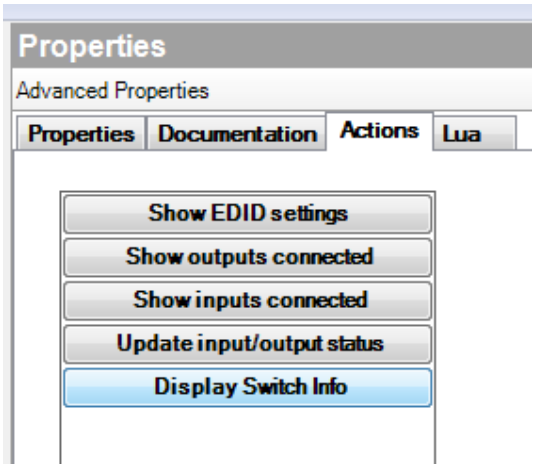
One of the features of the switch is its ability to detect if something is powered and connected to any of the inputs or outputs of the switch. Enable this feature if you would like the driver to check for any changes in this status every 15 seconds.

Device ID

This is set on the switch to 0 by default. If you change the ID number of the switch then you need to set this to be the same ID number. If you do not then the driver will not work.

Actions

We have provided a number of Actions that you can use in Composer to interrogate the switch.



You need to make sure the switch is physically connected and powered on in order to use these buttons.

Show EDID settings
For each input the HX-88 can either present its default EDID or the EDID copied from Output 1. If you press this button the current EDID setting for each input is shown on the Lua tab.

Show outputs connected
This will show which outputs on the switch have something connected to them. This requires that the sink devices be powered so that they can provide the Hotplug signal to the switch. The results are displayed on the Lua tab.

Show inputs connected
This will show which inputs on the switch have something connected to them. This requires that the source devices be powered so that they can provide the Hotplug signal to the switch. The results are displayed on the Lua tab.

Update input/output status
The switch does not automatically report changes to the inputs to outputs from the front panel. You can use this button to refresh Control4 with the current settings from the switch. The driver will automatically interrogate the switch when you make the serial connection in Composer.

Display Switch Info
This button causes the driver to interrogate the switch for its name and the number of inputs and outputs it has. This information is displayed on the Lua tab and is a good quick way of establishing that the communication between Control4 and the switch is good.

Variables

Matrix switches in Control4 have a standard set of VIDEO_OUTPUT_xx_INPUT variables which are populated to show which input is connected to which output. These are updated by the driver as Director switches the matrix. In order for these variables to be updated if a change is made directly on the switch or via IR then you must enable Query for Switch Status in the driver properties or execute a device specific command to update them.

In addition a number of other variables are populated and you can program on the event of any of these changing.

INPUT_x_STATE	True if the switch senses an input (source) device is powered and connected to the switch. In order for these variables to update you must either enable Query for Connection Status in the driver properties or execute a device specific command to update them.
OUTPUT_x_STATE	True if the switch senses an output (sink) device is powered and connected to the switch. In order for these variables to update you must either enable Query for Switch Status in the driver properties or execute a device specific command to update them.
EDID_x_STATE	This will be set either to 'Fixed' or 'Output 1' depending on the settings on the HX-88. In order for these to update you must either enable Query for Connection Status in the driver properties or execute a device specific command to update them.

Actions

The driver supports the standard Connect and Disconnect commands for each output. In addition the following Device Specific Commands are also provided.

Set EDID	This allows you to set the EDID for an input either to the Fixed standard EDID or to copy it from Output 1
Get Input/Output Status	This command interrogates the switch to find the current input to output settings. This information is then used to update Control4. This is useful to ensure that Control4 is periodically aware of any manual switches that have been made on the unit.
Get connection status	This command interrogates the switch to see which Inputs and Outputs are connected and powered. It updates the driver variables associated with this feature.
Get EDID status	This command interrogates the switch to report the EDID setting on each of the inputs. It then updates the driver variables associated with this feature.

Troubleshooting

If you are having problems with the driver the most likely cause is with the physical connection to the switch or forgetting to bind the serial connection in Composer.

Also check that the DIP switch on the rear of the Zigen is set for serial control.

If these have been made correctly check that the ID # of the switch is the same as that defined on the Properties tab. There should be no reason to adjust this from 0 in most cases.

Press the Display Switch Info Action button. If nothing is shown on the Lua tab and you are sure all the above are correct then you may have a faulty device.

Contact Details

We can be contacted in a number of ways:

- For technical support, the fastest way to get assistance is to put a ticket on our Helpdesk at www.extravegetables.com/helpdesk.
- Call us between 9:00 and 17:00 Monday-Friday on +1 (801) 285-9354 (USA) or on +44 (0) 20 8144 9354 (UK). Please note that Helpdesk tickets take priority over phone calls.