



## HDanywhere HDMI Matrix Driver

HKHA414SW

HKHA414SW\_V2

HKM44

HKM88

For use with:



Driver software written and provided by:



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## Introduction

This AMX module is based on the 4x4 HDMI Matrix and has been tested against the HKHA414SW, HKHA414SW\_V2, HKM44-UK and HKHA818SW HDMI switches. It was written and tested using NetLinx Studio version 3.2.0.418 compiling to run on a NI-3000 controller and a NI-2000 controller.

Each input can be thought of as a separate HDMI video source channel and each output has an assigned output number. AMX control devices can be used to route each channel input source to an appropriate video output by having code that sends the corresponding commands to the switch module. In this way, the user has complete control over what is being viewed and the location of where it is watched.

AMX Driver SW version : V3.0

## AMX Serial Comms Configuration

The serial port of the AMX control unit must be connected to the serial port of the HDMI switch via a female to female straight through cable. Female to female cables are typically null modem cables; in this case, a cross over adapter will have to be used in addition.

The serial comms configuration is

|              |        |
|--------------|--------|
| Baud rate    | 600bps |
| Data bits    | 8 bits |
| Parity       | None   |
| Stop bits    | 1 bit  |
| Flow control | None   |

## AMX Usage

### *Add the module to your project*

Copy the project file from the zip package to your project folder and then add it to your project. Then check the definitions of the device ID for the switch, the virtual device Ids for the virtual device modules and the model numbers, similar to the following:

```
define_device

dvTP                        = 10001:1:1      // Device ID

vdvModule44                = 33001:1:1      // Virtual Device ID

dvHKM44                    = 1:1:1          // Device number and Model Number


define_module 'HDanywhere_HD_Matrix' HKM_44( vdvModule44, dvHKM44, MODEL_HKM44 );
```

### *Interfacing with the Module*

For a complete example of the usage of the module, see the demonstration project that is shipped with this module.

**NOTE:** Feedback is received from the HKHA414SW\_V2 switch and local changes are displayed by the AMX user interface. However, no feedback is received from the other HD Matrix switches, HKHA414SW, HKM44 and HKM88. If any local changes are made to the Matrix Switch while the AMX module is online, these local changes will not be reflected by the AMX user interface.

### *Commands*

The module supports the following commands, sent to it using send\_command, for instance:

```
send_command vdvHKM_SWITCH, 'SW 1,3,4=3;';
```

switches outputs 1, 3 and 4 to input 3.

## HDanywhere / AMX Driver for HD Matrix Switches

| Command                      | Explanation  |
|------------------------------|--|
| SW [<output-list>=<input>;]+ | Requests the switch to perform a routing. <output-list> is a comma-separated list of outputs to switch. <input> is the input to switch them to. Input 0 indicates that there is no current input. Multiple switch requests can be chained together, each ending in a semi-colon. All the following requests are valid:<br><br>SW 4=1;<br>SW 1,3,4=2;<br>SW 4=1;2,3=3;1=4;<br><br>The space after SW and the trailing semi-colon are always required. |
| SW?                          | Requests the switch to report the current routing. This will generate one SW report string for all output ports. See the feedback section.   |

### **Feedback**

The module supplies the following feedback sent as a string to the module virtual device. The keyword "SW" is followed by a space.

The feedback reported here is the current status of the ports as reported by the AMX module. The current status of the ports of the actual HDMI switch cannot be reported as no feedback is given from the switch.

| String               | Explanation  |
|----------------------|--|
| SW <output>=<input>; | Reports that the given output has been switched to the given input from the user. Input 0 indicates that the output has no current input. Note that switch requests can be chained together. (see the Commands section). |