# Table of Contents

Safety Information...............................................................................................................1
Product Features..................................................................................................................2
HMA-8X8BT Configuration..................................................................................................3
  Front Panel..........................................................................................................................3
  Rear Panel ............................................................................................................................4
HMA-8X8BT Installation........................................................................................................5
  Physical Installation...........................................................................................................5
  HDMI Connections.............................................................................................................6
  HDBaseT Connections .......................................................................................................7
  Stereo Input Connections.................................................................................................8
  S/PDIF Input Connections.................................................................................................8
  Stereo Output Connections...............................................................................................8
  IR Connections ..................................................................................................................8
Product Operation ................................................................................................................9
  Power Up.............................................................................................................................9
  Web Interface Operation - Overview...............................................................................10
  1. Initial Setup - IP Address..............................................................................................12
  2. Configuration Settings ..................................................................................................12
  3. Discover all HDMI Devices..........................................................................................13
  4. Test the Installation .......................................................................................................14
  5. Pre-Authenticate all HDMI Devices...............................................................................16
  6. Lock the System .............................................................................................................16
CEC Control Configuration Rules .......................................................................................17
Cable Specifications............................................................................................................19
  Output HDBaseT Cable ......................................................................................................19
  HDMI Cable .......................................................................................................................19
Product Maintenance............................................................................................................20
Technical Specifications.......................................................................................................21
Warranty..............................................................................................................................22

Rev 1.1
Safety Information

Please read and understand all instructions in this manual before operating equipment.

- Keep these instructions in a safe, accessible place for future reference.
- Pay attention to all warnings, and follow all instructions. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Do not use this equipment near water, and unplug the product before cleaning and clean only with a dry cloth.
- Do not install near any heat sources such as heat registers, stoves, or other equipment that produce heat.
- Explanation of graphical symbols:
  ◊ Lightning bolt/flash symbol: the lightning bolt/flash and arrow-head within an equilateral triangle symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product enclosure which may be of sufficient magnitude to constitute a risk of shock to a person or persons.
  ◊ Exclamation point symbol: the exclamation point within an equilateral triangle symbol is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.

- WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE AND OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS EQUIPMENT.
- Do not defeat the safety purpose of the grounding-type plug. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of your outlet. Caution! To reduce the risk of electrical shock, grounding of the center pin of this plug must be maintained.
- Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and the point where they exit from the equipment.
- Do not block the air ventilation openings. Only mount the equipment per HydraConnect’s instructions.
- Caution! Shock Hazard. Do not open the unit - refer to qualified service personnel. Servicing is required when the equipment has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the equipment, the equipment has been exposed to rain or moisture, does not operate normally, or has been dropped.
- NOTE, This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna
  - Increase the separation between the equipment and the receiver
  - Connect the equipment into a outlet on a circuit different from that to which the receiver is connected
  - Consult the dealer or an experienced radio/TV technician for help
Product Features

The HMA-8X8BT is a complete HDMI processing system designed to provide fully integrated A/V distribution for a wide variety of automation systems. HMA-8X8BT provides full HDMI 8X8 matrix switching, 16X16 stereo switching with audio stripping and Dolby Digital downmixing, Analog and S/PDIF inputs, and full CEC control. The HMA-8X8BT’s unique features are:

- True 8X8 video matrix with no HDCP key limitations on the number of simultaneous displays connected to a source
- 8 HDBaseT outputs provide HDMI extension for 100 meters - two outputs can be re-configured for HDMI output to support local devices
- Integrated 16X16 audio matrix taps audio from all 8 HDMI inputs and from 6 analog inputs and from 2 S/PDIF inputs.
- DSPs downmix Dolby Digital 5.1 to stereo for distribution to 16 analog outputs, or re-injection to any output HDMI data stream for use with TV speakers
- Full per-channel audio controls including adjustable Lip Sync delay, volume, bass, treble, and balance
- Automatic EDID management ensures maximum video resolution and all audio format support
- Dynamic EDID, combined with Dolby Digital down mix, ensures multichannel and stereo audio can coexist
- Integrated CEC control for nearly all displays, sources, and A/V Receivers eliminates most IR blasters and controllers
- Integrated IP support for DirecTV receivers to eliminate IR blasters
- FlashConnect™ ensures near instantaneous video switching and no picture loss when adding or removing displays to or from a video stream
- Supports HDMI 1.4a - 36/30/24 bit deep color (225 GHz), and EDID and CEC processing and all 3D formats HDCP 1.4 compliant
- Supports all HDMI audio formats including Dolby TrueHD and DTS-HD
- On screen display shows users the shared status of any shared source
- A/V remix allows the viewing of one video source while listening to a separate audio source
- Reclocking for both inputs and HDMI outputs supports the use of up to 10+ meter HDMI cables (depending on cable quality and the mating equipment in the system)
• Rack Mountable with removable ears - simple installation

HMA-8X8BT Configuration

Front Panel
The front panel of the HMA-8X8BT has a Status LED as well as ventilation openings.
Rear Panel

The rear panel of the HMA-8X8BT has the following connectors:

1. 8 HDMI input connectors for connection to sources
2. 8 HDBaseT output connectors for connection to HydraConnect receivers
3. 2 HDMI connectors and a selector switch for each
4. 16 stereo output connectors for Stereo output to an external amplifier
5. 6 analog inputs and 2 S/PDIF input connectors
6. Network connector for Ethernet network
7. Power in connector
8. Reset to Factory Settings push button which restores DHCP IP addressing
9. 8 IR inputs - one per output channel

The following is a close-up of the indicator LEDs on the HDBaseT output connectors:

The Link LED (Green LED to the left of each HDBaseT output) and the HDCP LED (Orange LED to the right of each HDBaseT output) indicate the following:

**Green Link LED:**
- ON: Link connection is good and link is powered up
- BLINK: Link connection is good and link is powered down
- FLICKER: Connection cannot be established
- OFF: No communication between transmitter and receiver

**Orange HDCP LED:**
- ON: Data is being received and is HDCP protected
- BLINK: Data is being received and is not HDCP protected
- OFF: No data is being received
HMA-8X8BT Installation

Physical Installation

Follow these steps to install the HMA-8X8BT:

1. HMA-8X8BT can be used stand alone or Once the settings are finalized, click on the Save command to save these settings and to ensure that they will be retained after power-off. in a 19 inch rack. The chosen location must meet the environmental requirements listed in the Specifications section.

2. In a rack, HMA-8X8BT requires 5.0 inches of vertical height. Stand alone it can be placed on any flat surface capable of safely supporting its weight. Since the HMA-8X8BT ventilates front to back, no additional cooling space is required above or below the unit. However, if heat generating equipment is directly above or below the HMA-8X8BT, such as A/V receivers, at least 2 inches of space should be left between units to avoid heat transfer from the other equipment to the HMA-8X8BT.

3. If rack installation is implemented, attach the two supplied rack mount ears to the HMA-8X8BT with the supplied screws. Then install the HMA-8X8BT in the rack using the four rack mount screws supplied. Ensure that the screws are tightened sufficiently to secure the unit in the rack.

4. Using the supplied power cord, connect the HMA-8X8BT to a power source that meets the requirements in the Specifications section. Ensure that the power on/off switch located on the back of the HMA-8X8BT is easily accessible. Do not power on the unit at this time.

5. All HDMI cables should be secured to the CableTray support bar under the HDMI connectors using tie-wrap or equivalents. This will ensure that the cables remain secure.
**HDMI Connections**

Each source is connected to an HMA-8X8BT HDMI input. Use a quality High Speed rated HDMI cable for each connection. Pinout of the HDMI connectors is found in section the Cable Specification section.

Each output from the HMA-8X8BT will be connected to a display (television, monitor, projector, etc.) or an A/V Receiver which is then connected to a display. Displays or A/V Receivers that are less than 20 feet from the HMA-8X8BT can be connected with HDMI cables. Longer runs should use CAT cable and a HydraConnect HDBaseT receiver. Note that only HydraConnect supplied HDBaseT receivers are supported - use of other brand receivers may not operate or may cause damage to the HMA-8X8BT which will not be covered under warranty.

Outputs 1 and 5 have selector switches adjacent to their output connectors that supports selection of HDMI or HDBaseT output. Set the selector switch to the appropriate selection. Note that only one output connector is functional at any given time - either HDBaseT or HDMI, not both. Typical connections are shown below:
HDBaseT Connections

The HDBaseT RJ-45 connectors on the rear of the HMA-8X8BT will drive HDMI signals through CAT 5e or better cables up to 330 feet (100 meters) - see the Specification section for cable details. CAT Cables should use “B” termination, and “easy-connect” connectors are not recommended. Pinout is shown below:

<table>
<thead>
<tr>
<th>Pin</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Orange / White</td>
</tr>
<tr>
<td>2</td>
<td>Orange</td>
</tr>
<tr>
<td>3</td>
<td>Green / White</td>
</tr>
<tr>
<td>4</td>
<td>Blue</td>
</tr>
<tr>
<td>5</td>
<td>Blue / White</td>
</tr>
<tr>
<td>6</td>
<td>Green</td>
</tr>
<tr>
<td>7</td>
<td>Brown / White</td>
</tr>
<tr>
<td>8</td>
<td>Brown</td>
</tr>
</tbody>
</table>

**CAUTION:** DO NOT UNDER ANY CIRCUMSTANCES CONNECT THE HDBASET OUTPUT CONNECTOR TO A NETWORK. SERIOUS DAMAGE CAN OCCUR TO BOTH THE NETWORK EQUIPMENT AND THE HMA-8X8BT!

The HDBaseT specification allows for two keystones in the CAT cable, each within 30 feet (10 meters) of the end of the cable. Up to 6 HDBaseT cable segments can be used in series to extend the HDMI connection up to 1,980 feet using HDBaseT extenders between cable segments.

**CAUTION:** USE ONLY HYDRACONNECT HDBASET RECEIVERS WITH THE HMA-8X8BT! USE OF ANY OTHER RECEIVER MAY CAUSE DAMAGE TO THE HMA-8X8BT,
Stereo Input Connections

The HMA-8X8BT has six stereo inputs available for audio only sources. Use standard RCA cables to connect sources to these connectors.

S/PDIF Input Connections

The HMA-8X8BT has 2 S/PDIF input connections. Use standard coax cables to connect S/PDIF input sources to these connectors.

Stereo Output Connections

The HMA-8X8BT has 16 channels of stereo output. These outputs use standard RCA connectors to connect to an external amplifier.

IR Connections

The HMA-8X8BT has the ability to pass IR signals through the HDBaseT connections from the HMA-8X8BT to the device connected to the HDBaseT receiver. IR Input connectors are located above each HDBaseT output RJ-45. Connecting to these input connectors requires a 3.5mm mono mini plug - pinout for the plug is shown below:
Product Operation

Power Up

Once physically installed and all connections to system devices completed, the HMA-8X8BT should be configured and fully tested prior to starting operation of the automation system that will be used to control it. The HMA-8X8BT has a web interface that allows access to all of its operating parameters, and this is discussed in detail.

HMA-8X8BT has the following user controls:

1. **Power On/Off Switch** - located adjacent to the input power connection, this switch allows the HMA-8X8BT to be powered on or off. Ensure that the power on/off switch locate on the back of the HMA-8X8BT is easily accessible.

2. **LED Operation** - the status LED will flash numerous times during power-up self test and system initialization. Once the HMA-8X8BT has completed self test and is fully operational, the LED's behavior will be determined by the settings on the HMA-8X8BT’s web interface. Factory default setting is such that the LED will blink regularly at approximately once per second as a indication that the system is operating normally.

3. **IP Address Factory Reset Push Button** - the IP Reset push button is located on the rear of the HMA-8X8BT near the input power connection. The reset function may be required if the Internet address of the HMA-8X8BT was set manually and the information regarding this setting is lost. In this case, the HMA-8X8BT web interface may not be accessible. To regain control of the unit:
   
   a. While still powered, press and hold the Reset button until the status LED starts fast blinking and then comes on solid - then release. The HMA-8X8BT will reboot.
   
   b. Watch the status LED - after system initialization it will begin a fast blinking (1/2 second cycle time) for about three seconds. Press and hold the Reset button until the status LED comes on solid - then release.
   
   c. The HMA-8X8BT will restart and will now use DHCP for its IP address and should be discoverable on the network.

Should the HMA-8X8BT require cleaning, use a slightly damp cloth ensuring that no water will enter the unit.

**Warning:** there are no user serviceable parts inside HMA-8X8BT. Do not open the case. Refer any needed repairs to the manufacturer.

**Note:** If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
Web Interface Operation - Overview

The HMA-8X8BT’s control interface is through a web interface. It can be accessed on a personal computer (PC or Mac), a tablet, or smart phone - any device that has a web browser. To access the HMA-8X8BT’s web interface, power up the unit and go to address:

HTTP://hydra

If the network does not support DNS address decoding, use an IP scanner to find a device listed as Advantech Technology - that is the HMA-8X8BT. A typical Home Page will appear as shown below - note that the System Devices listed will vary based on your system:

For all operations, the factory default username and password is “admin”.

The following functions are available on various web pages:

1. **Current Status** - this displays the status of the HMA-8X8BT software, Internet connection, whether HMA-8X8BT has connected to an automation system, and the temperature inside HMA-8X8BT.

2. **Product Identification** - this displays the product name, software revision of the unit, and the firmware revision of the several sub-elements in the HMA-8X8BT.

3. **System Devices** - This area displays all of the HDMI devices in the system along with general details about the device. Clicking on any row will bring up a Device Properties screen with very detailed screen with extensive information on the device. Additionally, IP addresses for DirecTV receivers can be entered on the Device Properties screen.
4. **Commands** - this area lists the various operations that can be performed on the current web page. The following is the list of commands, but not all will show on every page - only commands appropriate to that page appear:

- **Discover**: Discover and configure all HDMI devices
- **Authenticate**: Performs HDCP pre-authentication across all sources, receivers, and displays
- **Lock/Unlock**: Locks or unlocks the current HDMI configuration against change
- **Update**: Updates the status of all known CEC devices - selecting this command forces an update
- **PowerOff/On**: Turns off/or CEC controlled devices - one device from a Device Properties page, or all known CEC devices if done on the Home Page
- **Reboot**: Restarts the HMA-8X8BT software
- **SoftwareUpdate**: Manually triggers search for and installation of any available software update
- **Shutdown**: Shuts down the HMA-8X8BT - system will have to be power cycled to restart the unit
- **Delete**: Deletes the selected device, event, alert, or an entry from the system
- **Dismiss**: Dismisses the selected alert
- **Export**: Exports the selected logs, events, alerts, settings, and database in a .txt format
- **Purge**: Deletes logs dated prior to the selected log

5. **Views** - this area lists the various sub-views that can be displayed from the present web page. The following is the list of commands, but not all will show on every page - only commands appropriate to that page appear:

- **Refresh**: Refreshes the present view - some displayed data is only updated once a minute and this feature forces an immediate update
- **Properties**: View the properties of the selected device
- **Control**: Allows matrix connections to be made with either the HDMI or Audio matrix
- **Edit**: Allows editing information on the page - when critical system changes will be caused by the edit a password confirmation will be required
- **Devices**: Provides a complete list of the HDMI devices in the system, along with their power status, Composer room and device name, CEC address, as well as descriptions of the device
- **EDID**: This will display the system wide EDID developed by HMA-8X8BT when the System Devices screen is being displayed - when a specific Device Properties is displayed, the EDID from that device is displayed, including the HMA-8X8BT which will display the developed system-wide EDID
Tests: Provides the ability to fully test any CEC controlled device
Information: System administration default view - provides system information
Status: Provides status of the selected device, including audio and video formats

1. Initial Setup - IP Address

The HMA-8X8BT factory configuration has DHCP enabled so that the HMA-8X8BT will be assigned an IP address by the system's DHCP server. To set a fixed IP address:

1. Click on the Admin tab
2. Click on EDIT under Views
3. Click the STATIC radio button next to IP Address Type
4. Enter in the new IP address
5. Enter the DNS server and Gateway addresses and click SAVE

The HMA-8X8BT will restart and will now be found at the IP address entered.

2. Configuration Settings

Click on the Settings Tab. Under Views, click on EDIT. Roll over on any of the parameters provides the details of its operation. The following configuration settings are of importance to set for proper system operation:

- **ControlSystemVendor**: Select the automation system to be used; factory default is Control4
- **EDIDAudioEnable_X**: Should be left in Auto which will enable stereo and Dolby Digital 5.1 only; if full multi-channel and High Bit Rate audio is desired, select these options but note that stereo end points may not be able to share audio from an a source connected to an end point so configured
- **EnableOSD**: Enables all on-screen display messages; factory default is Enabled
- **LEDFlashRate**: Controls the rate at which the Status LED Flashes; factory default is Medium
- **TVAudioControl**: Enables CEC volume control commands to be sent directly to the TV; usable only on those TVs using CEC control and that support CEC volume commands; factory default is None
- **TVSpeakerEnable**: Enables the use of TV speakers; the HMA-8X8BT audio processing system will re-inject stereo over the HDMI link to the TV and control the volume level; factory default is None
3. Discover all HDMI Devices

Ensure all sources are powered on and displaying HDCP protected content:

- All content players (BluRay, DVD, Servers, etc.) should be in the PLAY state and playing protected content such as a commercial BluRay disc.

- All satellite boxes should be tuned to pay-per-view channels (you do not have to purchase the video from the pay-per-view channel, just tune to the channel displaying the purchase screen).

- Cable boxes and AppleTV normally always provide their video in HDCP format so these need only be powered on.

- All A/V receivers should be configured so that the HDMI input which connects to the HMA-8X8BT is shown on its front panel as the selected input.

- All displays that have multiple inputs must have the input selected which has the HDMI cable connection to the HMA-8X8BT.

Note that the Home Page may show some devices at this point as HMA-8X8BT receives some initial unsolicited information from the system’s HDMI devices. Do not be concerned about any missing devices at this stage.

Press the DISCOVER button. A list of most HDMI devices will now appear in the list of System Devices. You may have to REFRESH the screen. If the automation system selected is Control4, missing devices will be added by clicking on the SYNC button which will pull the data from Composer. For non-Control4 applications, click on Add Device. This will bring up a Device Properties page as shown to the right:

---

**Device Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Room</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>Logical Addresses</td>
<td></td>
</tr>
<tr>
<td>Internet Address</td>
<td></td>
</tr>
<tr>
<td>Device Type</td>
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<tr>
<td>Vendor Id</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td></td>
</tr>
<tr>
<td>Last Power Command</td>
<td></td>
</tr>
<tr>
<td>HSS Address</td>
<td></td>
</tr>
<tr>
<td>Vendor</td>
<td>Unknown</td>
</tr>
<tr>
<td>Component</td>
<td>Unknown</td>
</tr>
<tr>
<td>Unit</td>
<td>Unknown</td>
</tr>
<tr>
<td>Control ID</td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td>Unknown</td>
</tr>
<tr>
<td>Model</td>
<td></td>
</tr>
<tr>
<td>Method</td>
<td></td>
</tr>
</tbody>
</table>

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The following data can now be entered to add a device:

- **Name**: Enter a descriptive name of the device to be added
- **Location**: Enter the name of the location where the device is located
- **Vendor**: Select the proper name from the pull-down list, or Other
- **Component**: Select the location where the device is connected - Input or Output
- **Unit**: Select the input or output number where the device is connected
- **Class**: Select the best description of the device from the pull-down menu

Click on SAVE and the new device will be added to the Home Page Devices list.

### 4. Test the Installation

There are two levels of tests that can be performed on the HMA-8X8BT - CEC device tests and system tests.

**Device Tests**

On the Home Page, click on the device to be tested. The Device Properties page for that device will open. Click on TESTS and the following page will appear:

![Device Tests](device_tests.png)

For displays, pressing the VIDEO button will show a simple message on the display. Press CANCEL to stop the test. The button will be grayed out and not usable if the device is not a display. If the device is CEC controlled, press the CONTROL button and CEC control tests will be run on the device and the results shown in the window below the buttons.
Device System Tests

On the Home Page, click on the “HM 8X8 HDMI Switch”. This will bring up the properties page which has four Views options:

- **HDMI Switch**: This page allows connections to be made between input and output HDMI devices. Clicking on a chicklet will cause it to turn blue indicating a connection has been made. Clicking on it again will cause it to turn gray and open the connection. Note that this display is real-time and therefore can be used as a debugging tool once the automation system is online. Any connections made by the automation system will appear as blue chicklets.

- **Audio Router**: This page is read-only and functions only as a diagnostic tool to show internal connections being made by the HMA-8X8BT.

- **Digital Stereo**: This page shows internal digital audio connections being made between HDMI inputs and HDMI outputs. The per-channel adjustments on the right side of the page for Volume, Mute, Balance, Bass, Treble, and Lip Sync are all adjustable. Once the settings are finalized, click on the Save command to save these settings and to ensure that they will be retained after power-off.
5. Pre-Authenticate all HDMI Devices

Ensure that all system devices are powered on and still configured as detailed in Step 3. On the Home Page, press the AUTHENTICATE button. After less than a minute, a message will appear indicating results. There should be zero errors.

6. Lock the System

On the Home Page, press the LOCK button and a lock symbol should appear to the left of the System Devices title. The System EDID can be checked by pressing the EDID button.

NOTE: Any physical changes made to the system, i.e. device changes, connection changes, etc., require that the system be UNLOCKED and steps 5 and 6 (with all devices powered on and sources providing protected content) be repeated to ensure proper system operation.
CEC Control Configuration Rules

Refer to the HydraConnect CEC Compatibility Document for a discussion of CEC control of the system’s equipment. Configuring an HDMI HMA-8X8BT controlled system requires attention to the following rules:

1. Video Sources
   - Sources that support CEC control should require no additional control connections
   - Sources that do not support CEC will require traditional control technology such as IR flashers or serial connections driven by the appropriate automation equipment, or IP if supported
   - DirecTV receivers (H21 and HR21 and later) can be controlled by HMA-8X8BT using IP control over Ethernet
   - Sony Disc Changer PDP-CX7000ES does support CEC control but for complete cover art support use an IP driver

2. Audio Only Sources
   - Audio only sources do not support CEC - other means such as IP, serial, or IR is required to control these devices

3. A/V Receivers
   - Though most A/V receivers support CEC, the interactions between the receivers and displays can sometimes be unpredictable, particularly between equipment from different manufacturers as well as of different ages, so provision for other means of control such as IP, serial, or IR is required to control these devices should be designed in as an option from the start of system design
   - A/V receivers that do support CEC are best configured with the same manufacturer display if that display also supports CEC
   - Refer to the HydraConnect CEC Compatibility Document for the latest in HMA-8X8BT support for different manufacturer’s A/V receivers - some combinations of A/V receivers and televisions are not supported and do not work reliably
   - Before mixing different vendor displays and A/V receivers, consult the HydraConnect CEC Compatibility Document for the latest in HMA-8X8BT CEC support, or contact the factory for last minute updates
4. Televisions

- Nearly all televisions except those from LG support CEC and can be controlled by HMA-8X8BT - refer to the HydraConnect CEC Compatibility Document for the latest in HMA-8X8BT support for different manufacturer’s.

- CEC does not support controlling the volume of television speakers, except in the case of Toshiba and Sharp televisions, and some newer Sony XBR models. However, the HMA-8X8BT can re-inject down mixed audio from HDMI sources to televisions and control the data streams volume and hence control the volume of TV speakers. Ensure that the TV has its speakers enabled and that the TV volume is set to about 90%. Ensure that the HMA-8X8BT is configured as described under the Web Interface Section 2.

- When installing a local HDMI device connecting to the television that wants to play audio through the attached A/V receiver, the display, the A/V receiver, and the HDMI extenders all must support Audio Return Channel (ARC).

5. Projectors

- Many projectors support CEC but not all do - refer to the HydraConnect CEC Compatibility Document for details.
Cable Specifications

Output HDBaseT Cable

Recommended Link Cable must meet TIA/EIA-568-B specifications. Such cable would be CAT5e UTP/STP, CAT-6 FTP cable in solid core types (350MHz). CAT-6 cable is preferred for best results.

HDMI Cable

The HDMI cable has the following pinout:
Product Maintenance

HMA-8X8BT requires no maintenance beyond simply keeping the fan inlets on the front of the unit clear.

Warning: there are no user serviceable parts inside HMA-8X8BT. Do not open the case. Refer any needed repairs to the manufacturer.
Technical Specifications

Input Ports .............................................. 8 x HDMI (Female Type)
                          1 x Ethernet
                          6 x Analog
                          2 x S/PDIF
                          8 x IR

Output Ports ............................................. 8 x RJ-45 HDBaseT
                          16 x Dual RCA Stereo
                          2 x HDMI (Female Type)

Supported Video Resolutions .......... 480i, 480p, 576i, 576p, 720p, 1080i, 1080p
                          8, 10, 12, 20, 24, 36 bits per channel

Supported Audio ................................ Dolby TrueHD 7.1, Dolby TrueHD 5.1,
                          Dolby Digital 5.1,
                          DTS-HD Master Audio 7.1,
                          DTS-HD Master Audio 5.1,
                          DTS 5.1, PCM 2.0, PCM 5.1

Dolby Downmixing............................... DD 5.1 (AC3) to two channel stereo

HDMI Support ...................................... HDMI 1.4a with 3D pass through

HDCP ....................................... HDCP 1.4 compliant

EDID Processing ................................. Fully automatic

Operating Temperature Range .......... 32°F to 104°F or 0°C to 40°C

Operating Humidity Range ............... 5 to 90% non-condensing

Input Voltage ..................................... 100 to 240 VAC, single phase, 50-60 Hz

Full Load Amps ................................. 2.2A Maximum

Power consumption ......................... 190W Maximum

IP Rating ...................................... 20

Dimensions less CableTray and Rack Ears (HxWxD)
                          5 x 17 x 13 (inch) or
                          12.7 x 43.2 x 33 (cm)

CableTray Depth (in addition to case).2 inch or 5 cm

Width Including Rack Ears .............. 19 inch or 48 cm

Weight .............................................. 15 lbs or 6.7 kg
Warranty

Limited Warranty

HydraConnect LLC warrants that (a) its products HMA-8X8BT will perform substantially in accordance with the accompanying written materials for a period of 5 years from the date of receipt and (b) that the product will be free from defects in materials and workmanship under normal use and service for a period of 5 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 5 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to customers that fall within those areas.

Customer Remedies

HydraConnect LLC and its suppliers’ entire liability and Customer’s exclusive remedy shall be, at HydraConnect LLC’s decision, either return of the price paid for the product, repair, or replacement of the product that does not meet this Limited Warranty and which is returned to HydraConnect LLC with a copy of the Customer’s receipt. This Limited Warranty is void if failure of the product has resulted from accident, abuse, misapplication, or natural occurrence. In example but not limited to: power surges (electrical storms, local power outage), dropping the product (or items on the product), contact with fluids, and physical misconduct. Any replacement product will be warranted for the remainder of the original warranty period.

No Other Warranties

To the maximum extent permitted by applicable law, HydraConnect LLC and its suppliers disclaim all other warranties, either expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the product and any related written materials. This Limited Warranty gives customer specific legal rights. Customers may have other rights depending on the jurisdiction.

No Liability For Damages

To the maximum extent permitted by applicable law, in no event shall HydraConnect LLC or its suppliers be liable for any damages arising out of the use of or inability to use this product, even if HydraConnect LLC has been advised of the possibility of such damages. Such damages include but are not limited to: special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss. HydraConnect LLC’ and its suppliers’ entire liability under any provision of this agreement shall be limited to the amount actually paid by you for the product. Some Jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damage. The above limitations may not apply to you in such jurisdictional cases.

Patents and Patents Pending

HMA-8X8BT, the software, CEC controls, and several system aspect of the system are covered by numerous patents and patents pending including US Patent 8,260,965..