

## CHD-110 Communicator User Manual



Thank you for purchasing the Luxi Electronics CHD-110 HDMI Communicator. Please read through this manual before using the product.

### **Troubleshoot first before using this product:**

One of the most common and puzzling symptoms of any HDMI based system is that the display having a flashing or snowy picture or no picture at all, even the system is well designed and installed and each component is tested good. The 2 most likely causes of this problem are 1) the system does not have enough bandwidth or the cable is too long for the signal data rate; 2) the DDC (hand shaking or copyright) communication breaks down.

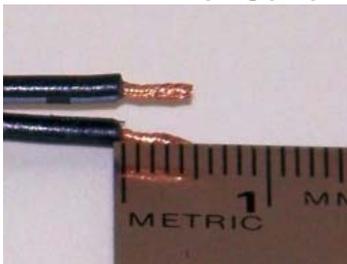
First bring the source device next to the display and connect the two directly with a short (6') HDMI cable to verify if the display is compatible with the source. Lower the source device output data rate (primarily the resolution) by one step (e.g., from 1080p to 1080i/720p, or from 1080i/720p to 480p), then reconnect the source device back to its original place in the system. If the picture comes out, then you know the problem with the system before was caused by not enough bandwidth of the system (add a Luxi Extender, P/N 74-035-01 at the display input to fix the problem). If the picture still does not come out after lowering the resolution, then most likely it's a DDC communication problem and use this product to fix it.

### **Power options:**

This product can draw power from the source device via HDMI cable or from the optional external power supply. To determine if the source device has enough power to power this device, connect this device in between the source and display devices via a short HDMI cable. If a normal picture appears on screen, then this device can get enough power from the source device and no need for an external power supply. If no normal picture on screen, then it needs an external power supply. You can buy the optional Luxi power supply (P/N 69-001-01) or use any standard 5 V DC power supply with at least 0.5 A output current capability.

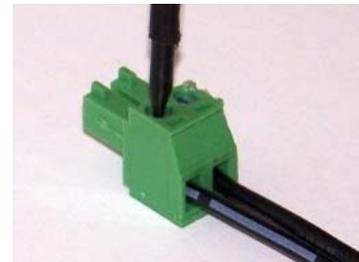


### **Power wire and plug preparations:**



Unplug the power supply from the outlet first; cut off the original DC plug if using a non-Luxi power supply, separate the two wires for about 1" (2.5 cm) long, strip off the wire insulation precisely 3/16" (5 mm) from the end; too short a lead won't provide enough for the plug screws to catch; too long a lead may create short circuit). Identify the positive and negative leads; Luxi power supply has a white strip on the positive wire. If not sure, use a multi meter to test

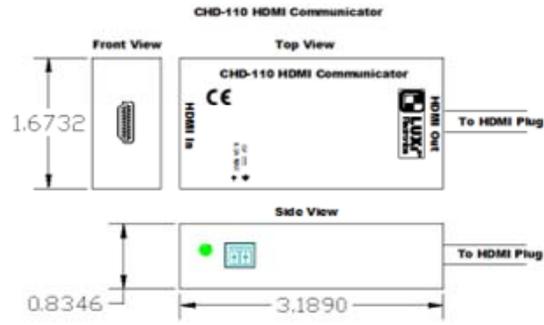
it. Insert the leads all the way to the end of the 3.5 mm captive screw plug (provided with each CHD-110) with the correct polarity (positive on left side), use a small flat head screw driver to tighten the 2 locking screws securely.



### **Where to apply the product:**

This product is designed to be plugged in on the destination side between the sink device (TV in most cases) and the incoming HDMI cable as a seamless inline device.

**Support:** Please contact your reseller directly for local support; or to Luxi in the contact info above.

<b>Product Specification</b>	<b>Part Number: 74-006-01</b>
HDMI Communicator, F-M pigtail	Model: CHD-110
<b>Product Image</b>	<b>Product Drawing</b>
	
<b>Features and Benefits</b>	<b>Mechanical</b>
<ul style="list-style-type: none"> <li>&gt; World's first HDMI EDID and HDCP communication problem solver</li> <li>&gt; Resolve the communication collisions by altering data timing and issuing new HDCP key</li> <li>&gt; No mounting needed; just plug it in-line between the cable from the source device and the sink device's input</li> <li>&gt; External power is not always required; it draws power from source device first. If not enough, then external power.</li> <li>&gt; Luxi patented locking HDMI connector design on both female input and male output to ensure secure connector mating</li> <li>&gt; Installers can resolve virtually any HDMI system issues by always carrying Luxi HDMI Extenders and Communicators in their tool cases</li> <li>&gt; HDMI 2.0 Deep Color, HEAC and 3D compatible</li> <li>&gt; HDCP 2.0 compliant</li> <li>&gt; CE and FCC compliant</li> <li>&gt; RoHS compliant</li> </ul>	Enclosure material: Aluminum Enclosure size: 3.2" x 1.7" x 0.8" (81 x 42 x 21 mm) Pigtail length (neck to neck): 4.6" (118 mm) Pigtail cable diameter: 0.3" (7.4 mm) Overall plug height (with clamshell): 0.45" (11 mm) Overall plug length (with clamshell): 2.0" (51 mm)
	<b>Electrical</b>
	Supported Signal Formats
	Maximum data rate: 6.75 Gbps (2.25 Gbps per color)
	Maximum pixel clock: 225 MHz
	Resolution range: Up to 1080p 36-bit @ 60 Hz, or 3D, or 4k @ 24 Hz
	Video formats: RGB and YCbCr digital video
	Audio formats: Dolby TrueHD, DTS-HD Master Audio and all other HDMI audio formats
	Standards: HDMI 2.0, DVI 1.0 (with proper adaptors)
	HDCP compliant: yes; rev 2.0, HDCP repeater
	CEC compliant: yes
	HDMI Ethernet compliant: yes
	HDMI return audio compliant: yes
	Electrical test results (1080p 24-bit 60 Hz results below)
	TMDS clock jitter: 81 mTbit
	TMDS data jitter: 134, 131, 136 mTbit for D0, D1, D2 resp.
	TMDS clock rise time: 202 ps
	TMDS clock fall time: 186 ps
	TMDS data rise time:
	116, 140, 123 ps for D0, D1, D2
	TMDS data fall time:
	111, 125, 113 ps for D0, D1, D2
	Clock duty: 48.23 min, 48.54 max
	Inter-pair skew: D0/D1, 1 mTpixel
	D0/D2, 0.9 mTpixel
	D1/D2, 2 mTpixel
	Power: 5 V DC, 0.3 A from source device or external power
	Optional power supply:
	Auto switching 100-240 V AC input on US plug, 5 V DC 2 A max on bare wires, wall ward type, UL, PSE, CE, FCC
	Mounting: not needed; pigtail plugged into a display input
	Regulatory compliance
	Safety: CE, CUL, UL (power supply only)
	EMI/EMC: CE, FCC Class B
	MTBF: 30,000 hours
	Warranty: 3 years parts and labor
<b>Package</b>	
1 piece in one white cardboard box; no power supply	
	
Box size: 8.2" x 5.6" x 2.5" (20.8 x 14.3 x 6.3 cm)	
Weight: package, 0.47 lbs (0.21 kg); product, 0.15 lb (66 g)	
32-pc box: 21.1" x 17.4" x 12.7" (53.7 x 44.1 x 32.3 cm)	
32-pc box weight: 19 lb (8.6 kg)	
<b>General</b>	
Input connector: 1 HDMI Type A female	
Output connector: 1 HDMI Type A male	
Power connector: 2-pin 3.5 mm captive screw receptacle	
<b>Other Related Products</b>	
Power adaptor, 100-240 V in, 5 V out, US, P/N 69-001-01	
	
HDMI Extender, P/N 74-035-01, model EHD-111	
	