

## AHD-211 4k HDMI Audio Extractor/Communicator User Manual



Thank you for purchasing the Luxi Electronics AHD-211 4k HDMI Audio Extractor/Communicator. Please read through this manual before using the product.

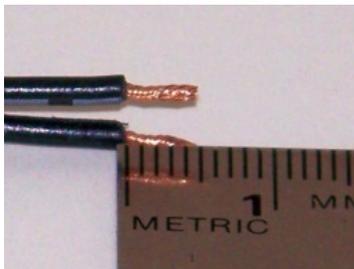
### Power options:

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 AHD-211) with the correct polarity (positive on left side), use a small flat head screw driver to tighten the 2 locking screws securely. If multiple of these products are used in the same location, one Luxi external power supply can power up to 5 units. Use extra insulated wires (18 AWG to 22 AWG) daisy-chain the multiple power input captive screw plugs, connecting all positive side together, and connecting all negative side together.



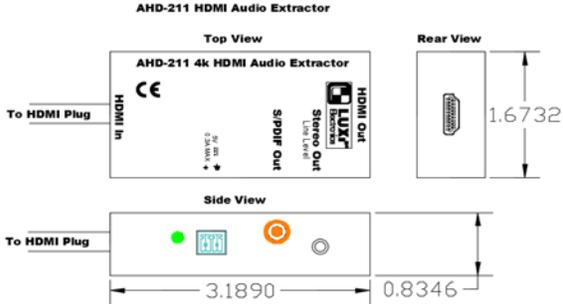
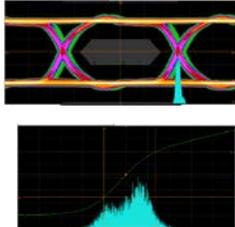
### Where to apply the product and how to connect the cables:

This product is designed to be plugged in directly onto the output connectors on the back of the source device. The HDMI output of this product is connected to the display with an HDMI cable. The S/PDIF output is connected to an audio device via a coax RCA cable. The analog audio output is connected to a power amp's line level input via a 3.5 mm mini cable. Note: it CANNOT drive a headphone.

### How the product functions:

All 3 audio outputs (HDMI audio, S/PDIF and analog audio) are live simultaneously. The display or the Audio Extractor's EDID would request the source to send 2 channel audio. The Audio Extractor regenerates the same HDCP key of the display. The Audio Extractor works without a display. When the HDMI Return Audio is in effect, the S/PDIF and analog audio outputs will be muted. This is the limitation of the HDMI specs. The product also alters DDC communication timing and corrects HDCP and EDID communication collisions.

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

<b>Product Specification</b>	<b>Part Number: 77-003-01</b>
HDMI 4k Audio Extractor/Communicator, M-F pigtail	Model: AHD-211
<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 smallest HDMI audio extractor with HDMI 2.0 support including 4k 60 Hz, 3D, HEAC, Deep Color, etc.</li> <li>&gt; No mounting needed; just plug it in-line between the source device's output and the cable to the sink device</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; Two channel analog output on 3.5 mm mini stereo jack and SPDIF output on female RCA connector</li> <li>&gt; Luxi's patented T-grip locking HDMI connector design on both male input and female output to ensure secure connector mating</li> <li>&gt; Luxi's SuperSlim HDMI plug and cable fits the tightest space</li> <li>&gt; Flexible pigtail and compact design allowing multiple of these products to hang on the back of a matrix switcher</li> <li>&gt; All 3 audio outputs (HDMI out, S/PDIF and mini jack) live</li> <li>&gt; Also functions as Luxi 4k Communicator, fixes HDCP and EDID errors caused by DDC communication collisions</li> <li>&gt; HDMI 2.0, HDCP 2.0, CE, FCC, RoHS compliant</li> </ul>	<p>Enclosure material: Aluminum        Enclosure size: 3.2" x 1.7" x 0.8" (81 x 42 x 21 mm)        Pigtail length (neck to neck): 4.8" (123 mm)        Pigtail cable diameter: 0.24" (6 mm)        Overall plug height: 0.35" (9 mm)        Overall plug length: 0.59" (15 mm)</p>
<b>Package</b>	<b>Electrical</b>
<p>1 piece in one white cardboard box;        no power supply</p>  <p>Box size: 6.0" x 4.8" x 1.1" (15.3 x 12.2 x 2.8 cm)        Weight: package, 0.33 lb (0.15 kg); product, 0.15 lb (68 g)        48-pc box: 15.8" x 14.2" x 9.8" (40 x 36 x 25 cm)        48-pc box weight: 17.6 lb (8.0 kg)</p>	<p>Supported Signal Formats        Maximum data rate: 18 Gbps (6 Gbps per color)        Maximum pixel clock: 600 MHz        Resolution range: Up to 4k 60 Hz 4:4:4        Full HDMI 2.0 support        Video formats: RGB and YCbCr digital video        Audio formats: Dolby TrueHD, DTS-HD Master Audio and all other HDMI audio formats (output L and R channels)        Standards: HDMI 2.0, DVI 1.0 (with proper adaptors)</p> <p>Audio outputs:        S/PDIF: 75 ohm, 0.6 Vp-p, 2 channel PCM        Mini jack: 50 ohm, 316 mVrms nominal, 2 channel analog max output 1.25 Vrms, THD 0.01%</p> <p>Electrical test results (1080p 24-bit 60 Hz results below)</p> <p>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</p> 
<b>General</b>	<b>Other Related Products</b>
<p>Input connector: 1 HDMI Type A female        Output connectors: 1 HDMI Type A male        1 RCA female S/PDIF        (1) 3.5 mm stereo mini jack analog        Power connector: 2-pin 3.5 mm captive screw receptacle</p>	<p>Power adaptor, 100-240 V in, 5 V out, US, P/N 69-001-01</p>  <p>TPR-110CR, P/N 74-017-01; RPR-110CR, P/N 74-020-01</p>  <p>Power: 5 V DC, 0.1 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</p>