Luxi™ HDMI Communicator – User Manual

LU-CHD-110

PureLink
digital solutions

Troubleshoot first before using this product

One of the most common and puzzling symptoms of any HDMI based system is the display having a flashing / snowy picture or no picture at all, even if the system is well designed and installed and each component is tested good. The two most likely causes of this problem are:

❶ The system does not have enough bandwidth or the cable is too long for the signal data rate.

❷ 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 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, you know the problem with the system before was caused by too less bandwidth. Add a Luxi Extender (LU-EHD-111) to the display's input to fix the problem.

If the picture still does not show after lowering the resolution, then most likely it's a DDC communication problem. Use this LU-CHD-110 HDMI Communicator to solve this problem.

Power options

This product can draw power from the source device via HDMI cable or from an optional external power supply. To determine if the source device has enough power to power this device, connect the CHD 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 there is no need for an external power supply. If you can't see a normal picture on screen, then it needs an external power supply. You can buy the optional power supply LU-PS-5V2A from PureLink or use any standard 5V 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 LU-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 and how to connect the cables

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

Mechanical	
Enclosure material	Aluminum
Enclosure size	81 x 42 x 21 cm
Pigtail length	118 mm
Pigtail cable diameter	7,4 mm
Overall plug height	11 mm
Overall plug length	51 mm

General	
Input connector	1 HDMI Type A female
Output connectors	1 HDMI Type A male
Power connector	2-pin 3.5 mm captive screw receptacle

For local support, please contact your reseller directly.

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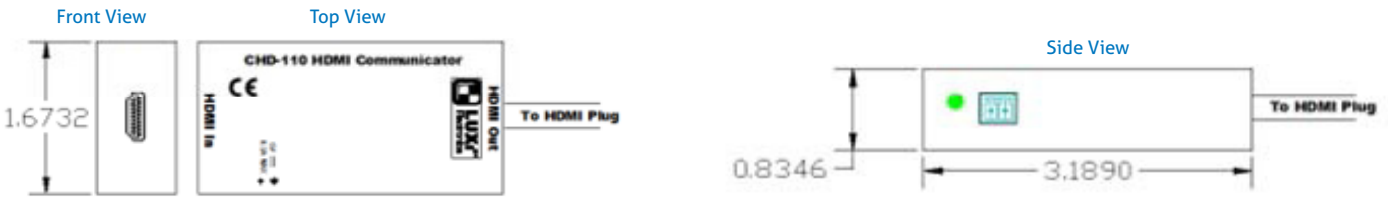
Product Drawing



Features

- World's first HDMI EDID and HDCP communication problem solver
- Resolve the communication collisions by altering data timing and issuing new HDCP key
- No mounting needed – just plug it in-line between the cable from the source device and the sink device's input
- External power is not always required – it draws power from source device first
- Patented T-grip locking HDMI connector design on both male input and female output to ensure secure connector mating
- Installers can resolve virtually any HDMI system issues by always carrying PureLink troubleshooting tools like LU-AHD-111, LU-EHD-111 and LU-CHD-110 with them
- HDMI 2.0 Deep Color, HEAC and 3D compatible
- HDCP 2.0 compliant
- CE and FCC compliant
- RoHS compliant

Technical Specifications

Maximum data rate	6.75 Gbps (2.25 Gbps per color)
Maximum pixel clock	225 MHz
Resolution range	4K / UltraHD / 2160p @24Hz, FullHD / 1080p @60Hz, FullHD 3D 1080p @24H
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)
HDCP	yes, rev 2.0, HDCP repeater
CEC	yes
HDMI HEAC	yes
HDMI ARC	yes
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
Safety	CE, CUL, UL (power supply only)
EMI/EMC	CE, FCC Class B
MTBF	30,000 hours
Warranty	3 years parts and labor

Packaging

BOX SIZE:
20.8 x 14.3 x 6.3 cm
WEIGHT:
Package 0.21kg
Product 0.66kg
32-PC BOX SIZE:
53.7 x 44.1 x 32.3 cm
32-PC BOX WEIGHT:
8.6 kg

Package Content

- One piece in one white cardboard box
- Power supply not included

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