LB-HDMI/DE

LINK BRIDGE™
HDMI AUDIO
DE-EMBEDDER SYSTEM

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SURGE PROTECTION DEVICE RECOMMENDED

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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1.0 PRODUCT DESCRIPTION

The LB-HDMI/DE-CH Audio De-embedder has been specifically designed for mounting in the LB-CH chassis (Figure 1), it allows the user to extract audio signals from an HDMI source. When connecting an HDMI signal to a TV or display the best audio is not always available, or in the case of a PC monitor, there is no audio at all available. Thus, with the LB-HDMI/DE unit the user can take the original HDMI audio signal and convert it to digital optical or analog Stereo (L/R) audio. This means that there is an audio output available to external speakers or to audio processing hardware, or to extend the audio signal pathway.

Features

- Compliant with HDMI, HDCP 1.2 and DVI 1.0
- Supports HDMI audio sampling rates up to 192 kHz
- Supports Optical S/PDIF sampling rates up to 48 kHz
- Supports high-bit-rate (HBR) audio
- No HDMI output connection is required to receive audio at the analog and optical outputs
- Supports EDID management for audio formats, can switch among built-in EDID (LPCM 2CH/Bitstream) and external EDID (TV)
- Supports 3D signal

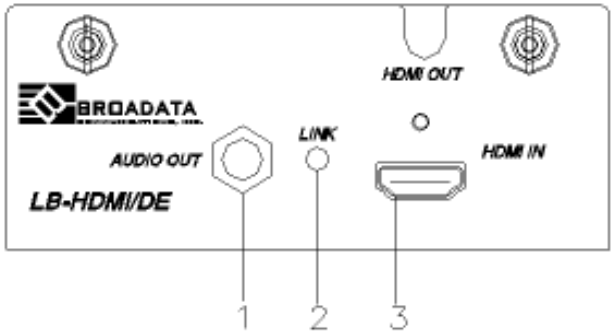
Package Contents

1 LB-HDMI/DE Audio De-embedder
1 Power Adaptor, 12VDC
1 User Manual

Figure 1-1
Four LB-HDMI/DE-CH units mounted in the LB-CH rack mount chassis.

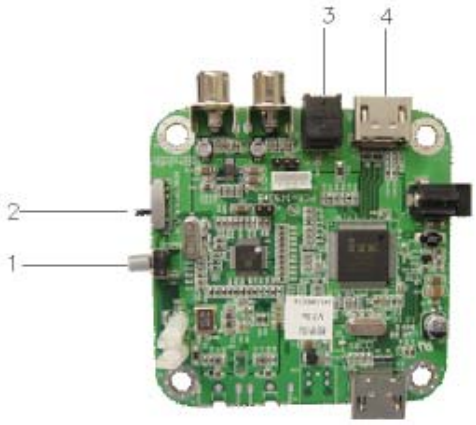
2.0 OPERATION CONTROLS AND FUNCTIONS

2.1 Front Panel



1. **L/R Out**: Connect to audio equipment such as an amplifier or active speakers with a stereo 3.5mm cable for audio output. Supports unbalanced analog stereo output only.
2. **Link LED:** The Link LED will illuminate in green when both the source and monitor is connected and has established a link. This LED will also blink once while the power is turned on.
3. **HDMI In**: Connect to a source device such as a DVD/Blu-ray player with an HDMI cable.

2.2 Circuit Board



1. **Power**: Switches the unit ON or puts the device into standby mode.
2. **TV/Bitstream/2CH LPCM:** This switch allows users to select the source's audio EDID.
   TV Mode: Switch to TV mode for the HDMI source to output audio per the EDID of connected TV or AV receiver, supports up to LPCM 7.1 channels.
   Bitstream Mode: Switch to Bitstream mode for the HDMI source to output Bitstream audio per the built-in EDID, supports up to compressed audio 5.1 channels.
   2CH LPCM Mode: Switch to 2CH LPCM mode for the HDMI source to output LPCM 2 channels audio per the built-in EDID.
3. **Optical Out:** Connect to audio equipment such as an amplifier or Hi-Fi system with an optical cable for digital audio output. Supports bit-stream up to audio 5.1CH and LPCM 2CH.
4. **HDMI Out**: Connect to the display with an HDMI cable for video and audio signal output. No HDMI output connection is required to send audio through the analog and optical outputs.

3.0 STAND-ALONE BOX ENCLOSURE

For the LB-HDMI/DE, besides the chassis mount version, it does come in a white plastic stand-alone box enclosure. The connectors, switches and functions are all the same but it does come with its own 5VDC power supply. All other functionality is as described in Sections 1.0 and 2.0 of this manual are indentical. Figure 2 below shows the Stand-alone box enclosure.

Figure 2-1
LB-HDMI/DE optional stand-alone box enclosure.

4.0 MAINTENANCE AND TROUBLESHOOTING

4.1 Maintenance

There is no operator maintenance other then keeping the units clean.

4.2 Troubleshooting

If the LB-HDMI/DE units do not operate properly after installation, check for possible cable breaks, loose connections, and incorrect cable connections. If a problem exists on the fiber link, please check your fiber connectors for improperly cleaned fiber cables and connectors. If problems persist that may be fiber related, contact BCI at 1-800-214-0222 for further assistance.

For electrical problems, perform the following troubleshooting procedures:

1. **If the POWER indicator is OFF, check for the following:**
   a. The line cord is plugged into the unit and your outlet has power.
2. **If the POWER indicator is ON, but the units are not working, check for the following:**
   a. Make sure the appropriate (Multimode) fibers are being used.
   b. Fiber and fiber connectors are not broken.

5.0 SPECIFICATIONS

Input Port	1 x HDMI
HDMI Audio Sampling Rate	Up to 192 kHz
Optical Audio Sampling Rate	Up to 48 kHz
Output Ports	1×HDMI, 1×Optical,1×L/R
HDMI Audio Format	LPCM 2/5.1/7.1CH, Dolby 5.1, DTS 5.1, DD+, D- TrueHD & DTS-HD
Optical Audio Format	LPCM 2CH, Dolby 5.1 & DTS 5.1
L/R Audio Format	Analog Stereo 2CH
Dimensions	90.7 mm (W)×85.8 mm (D) ×34 mm (H)
Operating Temperature	0 ÚC~40 ÚC/32 ÚF~104 ÚF
Storage Temperature	"20 ÚC~60 ÚC/"4 ÚF~140ÚF
Relative Humidity	20 ~ 90 % RH (non-condensing)
Chassis material	Metal
Box Color	Black
Operating Temperature	0^{o} ~ 50^{o}
Relative Humidity	0 ~ 95% RH (non-condensing)
Power Supply	110 – 240v AC 50/60 Hz, 12v @ 1.5 A DC
Power Supply	V / A DC (US/EU standards, CE/FCC/UL certified) or 5VDC Linear Power Adapter (US/EU Standards, CE/FCC/UL certified)

6.0 SERVICE PROCEDURE

6.1 Replacement Policy

Standard products found defective on arrival (DOA) will be replaced, based on availability, within 24 to 48 hours anywhere in the U.S. Please call Customer Service at **800-214-0222** for information.

6.2 Return/Repair Service

The Link Bridge LB-HDMI/DE System contains no user serviceable components. If you have a problem with your unit, please contact the Customer Service Department. To facilitate our return/repair processing please contact Broadata Communications, Inc. to obtain a Return Material Authorization (RMA). Please include the following information:

- Product model number
- Serial Number
- Complete description of problem
- Hardware installation description

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Website: www.broadatacom.com

7.0 LIMITED WARRANTY

Broadata Communications, Inc. (BCI) warrants, for a period of one year from date of shipment, each product sold shall be free from defects in material and workmanship. BCI will correct, either by repair, or at BCI's election, by replacement, any said products that in our sole discretion prove to be defective and are returned to the manufacturing location within 30 days after such defect is ascertained. All warranties are limited to defects arising under normal use and do not include malfunctions or failure resulting from misuse, abuse, neglect, alterations, electrical power problems, usage not in accordance with product instructions, improper installation, or damage determined by BCI to have been caused by the Buyer or repair made by a third party. Limited warranties granted on products are to the initial customer end-user and are not transferable. OUR LIABILITY UNDER THIS WARRANTY SHALL IN ANY CASE BE LIMITED TO THE INVOICE VALUE OF THE PRODUCT SOLD AND BCI SHALL NOT BE LIABLE TO ANYONE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING FROM THE USE OF ITS PRODUCTS OR THE SALE THEREOF. We make NO WARRANTY AS TO THE MERCHANTABILITY OF ANY GOODS, OR THAT THEY ARE FIT FOR ANY PARTICULAR PURPOSE OR END APPLICATION NOR DO WE MAKE ANY WARRANTY, EXPRESSED OR IMPLIED OTHER THAN AS STATED ABOVE.

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