HDMI/Dante over IP PoE Extender
500759 TX Dante
Quick Installation Guide

Overview
MuxLab’s HDMI/Dante over IP PoE Transmitter, UHD-4K (model 500759-TX-Dante) delivers HDMI at up to 4K@30Hz with Dante audio to create an independently distributed AV network. Hundreds of displays and various video wall configurations are supported, depending on network bandwidth. Audio can be independently distributed to hundreds of Dante supported audio devices.

Each Transmitter can be connected via Cat5e/6 cable up to 330ft (100m) from an Ethernet Switch. These units support HDR10 at up to 4K@30Hz (4:2:2).

The Transmitter supports PoE (PD) and may be powered by a PoE (PSE) Ethernet Switch. The IR Emitter and IR Sensor, if required, may be purchased separately for IR based remote control applications.

For the point-to-point and multipoint-to-multipoint configuration the Ethernet switch must have Gigabit ports, DHCP server capability, and support IGMP and Jumbo Frames. MuxLab recommends using the Cisco SG350 series Managed Switches or the SG550X series stackable version.

Applications
Applications including any audio Dante digital systems in professional and commercial applications over long distances.

Installation
1. Identify the connectors on the Transmitter as indicated on the product labels, see the above front and rear product views for further details.

2. Verify that the distance between the HDMI Transmitter is within MuxLab specifications (see Specifications table for more details).

3. To install the Transmitter:
   3a. Connect the Transmitter to the HDMI video source with an HDMI compliant cable.
   3b. If the application is point-to-point, then connect one (1) length of Cat 5e/6 (or higher) grade UTP cable to the RJ45 LINK connector on the Transmitter. If transmitting over the network, use an Ethernet Switch between Transmitter and Receiver.

4. Configuring Dante equipment
   4a. Use the free Dante Audinate Controller software found on the Audinate website (https://www.audinate.com/products/software) to manage the connectivity between the 500759 TX Dante and other Dante audio equipment. Both point-to-point and point-to-multipoint connections are supported.
5. To install the 500759 RX Receiver:
   5a  Connect the Receiver to the HDMI display equipment with an HDMI compliant cable.

6. If the application is point-to-point, then connect one (1) Cat 5e/6 cable (or higher) coming from the Transmitter, to the RJ45 LINK connector on the Receiver. If transmitting over the network, use an Ethernet Switch between Transmitter and if the configuration is a point-to-multipoint or multipoint-to-multipoint:
5a. You will need to use an Ethernet Switch with Gigabit ports and DHCP Server support. In addition Jumbo Frame support is required, and IGMP Protocol support is required for the multipoint-to-multipoint case. Verify that the Ethernet Switch is configured correctly and that the DHCP Server, IGMP Protocol, and Jumbo Frames are enabled. See the manufacturer operating manual for more information about configuring the Ethernet Switch.

5b. Connect all Transmitters and Receivers to the Ethernet Switch.

5c. Use the DIP Switches to select a unique Device ID for each Transmitter present on the network and configure each Receiver Device ID to the corresponding selected Transmitter.

   Note: This step is not necessary if the MuxLab Pro Digital Network Controller (500811) is used.

7. Powering the Transmitter or Receiver via an external power supply is only necessary where PoE (PSE) is unavailable. If PoE is unavailable, connect the 5 VDC power supply (sold separately) to each Receiver and to an AC power outlet. Next connect each Transmitter in the same manner. If power is present, the green power LED on each Transmitter and Receiver will illuminate.

   Note: Power ‘ON’ the HDMI 4K over IP PoE Extender only after all connections have been made.

8. Power ‘ON’ the HDMI equipment and verify the image quality.

9. This product supports IR pass-thru control. If infrared remote control is needed to control the Source equipment from the Display, connect the IR Sensor (sold separately) to the 3.5mm Stereo Jack of the Receiver and the IR Emitter (sold separately) to the 3.5mm Mono Jack of the Transmitter.

   Note: You can differentiate the IR Sensor and the IR Emitter by looking at the 3.5 mm plug. The IR Sensor is using a Stereo Plug (3 Contacts) and the IR Emitter a mono plug (2 Contacts).

10. Position the IR Sensor so that it is directed at the hand-held remote control. For a clear IR signal reception, aim the hand-held remote control at the top of the IR Sensor enclosure.

11. Position the IR Emitter as close as possible to the source’s IR Sensor (i.e. DVD player). For a clear IR signal reception, the IR Emitter can be glued on the source’s IR Sensor. The IR Emitter’s signal is transmitted from the side of the enclosure.

12. This product supports RS232 bidirectional communication. On the Transmitter, the RS232 port is configured as a DCE; and on the Receiver as a DTE. Please connect your RS232 cable accordingly. Configure the RS232 communications setting via the device web interface.

13. Commands or messages may be sent via RS232 by connecting a PC to the RS232 port of the HDMI 4K over IP PoE Extender, or over the network via IP. This communications is meant to be machine to machine.

14. The following diagram illustrates a typical application

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### Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions in regard to the installation of the 500759 TX Dante:

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Transmitter LEDs</th>
<th>Receiver LEDs</th>
<th>Probable Cause</th>
<th>Possible Solutions</th>
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</table>
| No Image                             | OFF               | OFF           | No power                                            | • Check power connections  
|                                      |                   |               |                                                    | • Check PoE Ethernet Switch Settings                        |
|                                      | BLINK             | OFF           | Booting                                             | • Wait until booting process finish                         |
| No Image                             | ON                | OFF           | No Ethernet Link                                    | • Check Ethernet Switch Status  
|                                      |                   | ON            |                                                    | • Check Ethernet Switch Settings                             |
| Info Screen                          | ON                | OFF           | UTP Cable                                           | • Check the Receiver UTP cable                              |
|                                      | OFF               | ON            |                                                    |                                                             |
|                                      | ON                | BLINK         | Wrong setting on Decoder                            | • Check DIP Switch address of the Receiver                   |
|                                      |                   |               |                                                    |                                                             |
| Choppy Video                         | ON                | ON            | Configuration                                        | • Check cable length  
|                                      | ON                | ON            |                                                    | • Check HDMI Cable Quality                                  |
|                                      | ON                | ON            |                                                    | • Check if Jumbo Frame and IGMP are enabled on the Ethernet Switch |
| Image flickers when powering up nearby equipment | ON                | ON            | Interference                                        | • Use STP cables                                             |
| IR not functioning *                 | ON                | ON            | Interference from sunlight, Fluorescent, Neon or Halogen lights | • Place the IR equipment away for the interfering light |
| IR not functioning *                 | ON                | ON            | Interference from RF radiation from the TV          | • Place the IR equipment away for the RF radiation          |

* IR Emitter and IR Sensor sold separately.

If you still cannot diagnose the problem, please call MuxLab Customer Technical Support at 877-689-5228 (toll-free in North America) or (+1) 514-905-0588 (International).