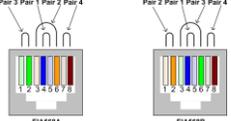


Specifications

Environment	HDMI (up to 1080p @ 30Hz)
Devices	DVD, plasma, projectors, monitors, TV, PC, laptops, servers supporting HDMI.
Control	Controllable via the Ethernet port.
HDMI standard	HDMI ver. 1.3, HDCP 1.1
Connectors	One (1) HDMI receptacle. One (1) RJ45S for Cat 5e/6 unshielded or shielded twisted pair. One (1) 3.5mm jack for IR emitter/sensor. One (1) DB9 Serial Port for RS232. Six (6) DIP Switches for device ID addressing.
<i>Note: Cables not included.</i>	
Maximum Distance	On HDMI (per side): 6.6ft (2m) On Cat5e/6: 330ft (100m)
Latency	Less than 500ms
Compression	Video: H.264 fully compliant with ISO/IEC 14496-10 high profile and level 4.1, up to 1920x1080p @ 30Hz Audio: MPEG
Network Requirement	Compliant with the full IEEE 802.3-2002 specifications (100BaseTX).
Network Bandwidth	Video: 18Mbps, Audio: 256Kbps
IR Frequency	38KHz to 56KHz
RJ45 Pin Configuration	<p>RJ45 Link</p>  <p>Pin 1 (R) Pin 2 (T) Pin 3 (R) Pin 6 (T) Pin 4 (R) Pin 5 (T) Pin 7 (R) Pin 8 (T)</p> <p><i>Use EIA/TIA 568A or 568B straight-through wiring.</i></p>
Power Source	This device supports PoE (PD), an external power supply is not included. It is intended to be powered via a PoE (PSE) Ethernet Switch. If required, an optional power supply (500993) may be purchased separately.
PoE Standard	IEEE 802.3af
Power Consumption	Transmitter: 4.5W Receiver: 2.5W
Temperature	Operating: 0° to 40°C Storage: -20° to 85°C Humidity: Up to 95% non-condensing
Enclosure Type	Metal enclosure.
Dimensions	4.4" x 4.6" x 1.0" (111mm x 120mm x 25mm)
Weight	1.5lbs (0.7kg)
Compliance	Regulatory: FCC, CE, RoHS Flammability: 94V0
Warranty	2 years
Order Information	500757 HDMI over IP H.264 PoE Extender Kit 500757-TX HDMI over IP H.264 PoE Extender TX 500757-RX HDMI over IP H.264 PoE Extender RX
Accessories (These items are sold separately)	500920 Rackmount Transceiver Chassis 16-Port 500917 Wall Mount Transceiver Bracket Kit 500998 IR Emitter, and 500994 IR Sensor 500993 Univ. Locking Power Supply 5VDC/2.6A US/UK/EU Blade



HDMI over IP H.264 PoE Extender Kit 500757

Quick Installation Guide

Overview

The HDMI over IP H.264 PoE Extender Kit allows HDMI equipment to be connected up to 330ft. (100m) @ 1080p via one (1) Cat5e/6 unshielded twisted pair cable in a point-to-point configuration. Point-to-multipoint and multipoint-to-multipoint is possible by connecting several Transmitters and Receivers to the same local Ethernet network. The Transmitter (500757-TX) and Receiver (500757-RX) may be sold separately, and support PoE (PD) if used with a PoE (PSE) Ethernet Switch. The kit comes with one (1) Transmitter and one (1) Receiver. IR Emitter and IR Sensor, if required, may be purchased separately for IR based remote control applications.

For the point-to-multipoint and multipoint-to-multipoint configurations the Ethernet Switch must have Gigabit ports, DHCP Server capability and additionally support the IGMP communication protocol for the multipoint-to-multipoint case. MuxLab recommends using the Cisco SG300 Series Managed Switches.

The MuxLab ProDigital Network Controller (500811) is available to simplify the configuration and utilization of the 500757 and other MuxLab IP based products via an Ethernet web interface.

Applications

Applications include commercial and residential AV systems, classroom projector systems, digital signage, boardroom systems, collaborative PC systems, and medical information systems.



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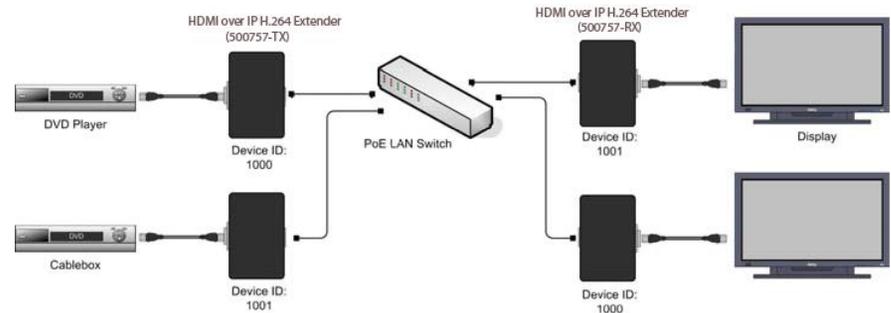
Installation

1. Identify the connectors on the Transmitter and Receiver 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 and Receiver is within MuxLab specifications (see Specifications table for further 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 Cat5e/6 (or higher) grade UTP cable to the RJ45 LINK connector on the Transmitter. If transmitting over the network, use an Ethernet Switch between the TX & RX unit
4. To install the Receiver:
 - 4a. Connect the Receiver to the HDMI display equipment with an HDMI compliant cable.
 - 4b. If the application is point-to-point, then connect one (1) Cat5e/6 cable coming from the Transmitter, to the RJ45 LINK connector on the Receiver. If transmitting over the network, use an Ethernet Switch between the TX & RX unit
5. 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 IGMP Protocol support is required for the multipoint-to-multipoint case. **Verify that the Ethernet Switch is configured correctly, that the DHCP Server is enabled, and that the IGMP Protocol is enabled for multipoint-to-multipoint applications.** See the 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 ProDigital Network Controller (500811) is used.
6. Powering the Transmitter or Receiver via an external power supply is only necessary where PoE (PSE) is unavailable. If PoE is unavailable, connect a 5 VDC power supply (500993 – 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 over IP H.264 PoE Extender only after all connections have been made.
7. Power ‘ON’ the HDMI equipment and verify the image quality.
8. This product supports IR pass-thru control. IR Emitter and Sensor are not included, and are sold separately. If infrared remote control is needed to control the Source equipment from the Display, connect the IR Sensor (PN: 500994) to the 3.5mm Stereo Jack of the receiver and the IR Emitter (PN: 500998) 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).
9. 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.
10. 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.

11. 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. The default settings are 115.2K, N, 8, 1.
12. The following diagram illustrates a typical point-to-point LAN configuration.



Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions in regard to the installation of the HDMI over IP H.264 PoE Extender Kit:

Symptom	Transmitter LEDs		Receiver LEDs		Probable Cause	Possible Solutions
	Power	Link	Power	Link		
No Image	OFF	OFF	OFF	OFF	No power	<ul style="list-style-type: none"> • Check power connections. • Check PoE Ethernet Switch setup.
No Image	ON	OFF	ON	ON	Internal Error	<ul style="list-style-type: none"> • Reboot the Transmitter.
No Image	ON	ON	ON	OFF	Internal Error	<ul style="list-style-type: none"> • Reboot the Receiver.
No Image	ON	ON	ON	ON	HDMI, UTP or Video source	<ul style="list-style-type: none"> • Check HDMI & UTP cables and video source.
Choppy Image	ON	ON	ON	ON	Ethernet Switch	<ul style="list-style-type: none"> • For Multipoint-to-Multipoint enable the IGMP mode on the Gigabit Ethernet Switch.
IR not functioning *	ON	ON	ON	ON	Remote control not directed at the IR Sensor, or IR Emitter not directed at the source.	<ul style="list-style-type: none"> • Make sure the IR Sensor is directed towards the remote and the IR Emitter towards the equipment. (IR Emitter and Sensor purchased separately)

* 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).