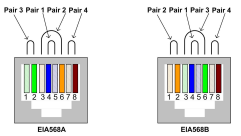
Specifications

Specifications	
Environment	HDMI and USB connectivity.
Devices	Blu-Ray, projectors, monitors, TV, PC, laptops, servers, and Smart White Boards.
Bandwidth	300MHz
Signals	HDMI 2.0b (4K/30 4:4:4 & 4K/60 4:2:0), USB 1.1 & 2.0 and HDCP 2.2
Connectors *Note: Cables not included.*	One (1) HDMI receptacle Four (1) USB type A connectors One (1) RJ45 for Ethernet connectivity One (1) 3.5mm jack for Audio-Out One (1) 3.5mm jack for Directional IR One (1) 2.1mm jack for power
Maximum Distance *Based on a maximum length of 6.6ft (2m) of HDMI cable per end.*	Cat5e/6: 330ft (100m) *Note: When installed in an electrically noisy environment, an STP cable must be used. Also, cross-connection reduces the effective distance depending on the grade of twisted cable used.*
Latency	Typical one (1) frame (16ms)
Compression	JPG2000
Bandwidth	Up to 500Mbps
Network Requirement	1 Gig Ethernet with IGMP, Jumbo Frames and PoE
RJ45 Pin Configuration *Reverse Polarity Sensitive. Use EIA/TIA 568A or 586B straight-through wiring.*	**RJ45 Link** Pin 1 (R) Pin 2 (T) Pin 3 (R) Pin 6 (T) Pin 4 (R) Pin 5 (T) Pin 7 (R) Pin 8 (T) 
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	IEEE 802.3af
Power Consumption	3W
Temperature	Operating: 0° to 40°C Storage: -20° to 85°C Humidity: Up to 95% non-condensing
Dimensions	5.03" x 4.53" x 1.66 (128mm x 115mm x 42mm)
Weight	1.35 lb (0.61 kg)
Compliance	Regulatory: FCC, CE, RoHS Flammability: 94V0
Warranty	3 years
Order Information	500777-RX HDMI/USB over IP PoE Wall Plate Receiver, UHD-4K 500777-RX-WH HDMI/ USB over IP PoE Wall Plate Receiver, UHD-4K (White)
Accessories (This item is sold separately)	500993 Universal Locking Power Supply 5VDC/2.6A US/UK/EU Blade

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HDMI over IP PoE Wall Plate Receiver
500777-RX
Quick Installation Guide

Overview

The HDMI over IP PoE Wall Plate Receiver allows HDMI and USB equipment to be connected up to 330ft (100m), with video supported at up to 4K (3840x2160) resolution @ 30Hz via one (1) Cat5e/6 unshielded twisted pair cable in a point-to-point configuration. The USB port may be used for extending various USB devices including Smart Boards. Point-to-multipoint and multipoint-to-multipoint configurations are also possible by connecting several Transmitters and Receivers to the same local Ethernet IP network via an Ethernet Switch. The HDMI/USB over IP PoE Wall Plate Receiver also supports PoE (PD) if used with a PoE (PSE) Ethernet Switch.

For the point-to-multipoint and multipoint-to-multipoint configuration the Ethernet Switch must have Gigabit ports, Jumbo Frame capability, DHCP Server capability, PoE, and additionally support the IGMP communication protocol for the multipoint-to-multipoint case. MuxLab recommends using the Cisco SG300 or SG500 Series Managed Switches.

The MuxLab ProDigital Network Controller (500811) is available to simplify the configuration and utilization of the 500777-RX and other MuxLab IP based products via an Ethernet web interface. The MuxLab Control Android and iOS Application may also be used for connectivity management, in combination with the 500811 Network Controller.

Applications

Applications include commercial and residential AV systems, classroom systems, digital signage, boardroom systems, conference rooms, and collaborative PC systems.

Installation

1. Identify the connectors on the Transmitter as indicated on the product labels, see the above product view for further details. Note that the Ethernet network connector is on the rear.

2. Verify that the distance between the HDMI/USB over IP PoE Wall Plate Transmitter and other MuxLab Receivers is within the specifications (see Specifications table for more details).

3. Connect the Receiver to the HDMI display equipment with an HDMI compliant cable.

   3a. 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 Receiver.

4. Connect the USB port of the Host device to the Transmitter, the USB port of the end device to the Receiver.

   4a. Connect the two Receiver USB 1.1 ports to a USB keyboard and mouse.

   4c. Connect the two Receiver USB 2.0 ports to other USB devices, such as a printer, drawing pad, storage device, camera, etc.

5. If the configuration is a point-to-multipoint or multipoint-to-multipoint:

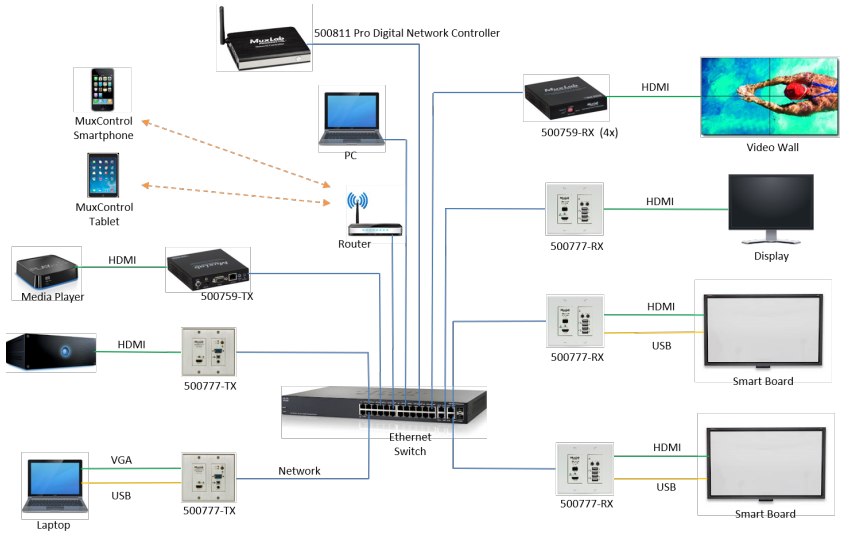
   5a. You will need to use an Ethernet Switch with Gigabit ports and DHCP Server support. In addition Jumbo Frame support is required and IGMP Protocol support is required for the multipoint-to-multipoint case. **Verify that the Ethernet Switch is configured correctly and that the DHCP Server, the IGMP Protocol and the Jumbo Frame are enabled**.

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/USB over IP PoE Wall Plate Transmitter and any other Transmitters and Receivers only after all connections have been made.

7. Power 'ON' the HDMI and USB equipment and verify the image quality and data transfer.

8. The following diagram illustrates a typical LAN configuration with other compatible MuxLab AV over IP devices. The 500777-RX is compatible with the MuxLab 500759/770/771/773/778 Transmitters.



Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions in regard to the installation of the HDMI/USB over IP PoE Wall Plate Transmitter:

Symptom	Transmitter LEDs		Receiver LEDs		Probable Cause	Possible Solutions
	Power	Link	Power	Link		
No Image or USB signal	OFF	OFF	OFF	OFF	No power	• Check power connections • Check PoE Ethernet Switch Setup
No Image or USB signal	BLINK	OFF	BLINK	ON	Booting	• Wait until booting process is finished
No Image or USB signal	ON	OFF	ON	OFF	No Ethernet Link	• Check Ethernet Switch Status • Check UTP Cables
Info Screen	ON	OFF	ON	BLINK	UTP Cable	• Check the Transmitter UTP cable
Info Screen	ON	ON	ON	OFF	UTP Cable	• Check the Receiver UTP cable.
Info Screen	ON	BLINK	ON	BLINK	No Data Connection	• Check network settings
Info Screen	ON	ON	ON	BLINK	Wrong setting on Receiver	• Check network settings
Choppy Video	ON	ON	ON	ON	Configuration	• Check cable length • Check the HDMI or VGA Cable Quality • Check if Jumbo Frame and IGMP are enabled on the Ethernet Switch
Image flickers when powering up nearby equipment	ON	ON	ON	ON	Interference	• Use STP cables

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).