Specifications

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Environment	HDMI 2.0
Devices	DVD, plasma, projectors, monitors, TV, PC, laptops, servers supporting HDMI.
Transmission	Transparent to the user
Bandwidth	594MHz
Signals	HDMI 2.0 and HDCP 2.2
Connectors	One (1) HDMI receptacle. One (1) RJ45S for Cat 5e/6 unshielded or shielded twisted pair. One (1) 3.5mm jacks for 1-way IR (emitter or sensor) (IR port supports carrier wave from 38 to 60KHz) Note: HDMI cables not included.
Maximum Distance *Based on a maximum length of 6.6 ft (2 m) of HDMI cable per end.*	30m (100ft) at 4K/60 (4:4:4) uncompressed over Cat 6a/7 40m (130ft) at 4K/30 (4:4:4) uncompressed over Cat 6a/7 45m (148ft) at 1080p/60 uncompressed over Cat 6a/7 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.
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)
Cable	One (1) Cat 6a/7 or better twisted pair cables required
Power Supply	One (1) 110-240V/12VDC @ 2A with blade US, UK, Euro
Power Consumption	6 Watts
Temperature	Operating: 0° to 40°C Storage: -20° to 70°C Humidity: Up to 95% non-condensing
Enclosure	Metal black
Dimensions	90 x 44 x 23 mm
Weight	1.02 lbs.
Compliance	Regulatory: FCC, CE, RoHS
Warranty	2 years
Order Information	500409 HDMI / Bi-IR Extender Kit

MuxLab
PRODIGITAL™

2321 Rue Cohen, Montreal Quebec, Canada. H4R 2N7
Tel: (514) 905-0588   Fax: (514) 905-0589
Toll Free (North America): (877) 689-5228
E-mail: info@muxlab.com   URL: www.muxlab.com

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HDMI Extender Kit

500409

Quick Installation Guide

Overview
The HDMI 2.0 Extender Kit allows HDMI equipment supporting uncompressed video up to 4K/60 (4:4:4) resolutions to be connected over Cat6a/7 unshielded twisted pair cable in a point-to-point configuration at distances up to 30m at 4K/60, 40m at 4K/30 and 45m at 1080p. The unit supports HDCP 2.2, and audio pass-through up to Dolby Atmos & DTS:X. The HDMI 2.0 Extender Kit supports a 1-way IR port (carrier wave) for remote control of end devices. The kit comes with one (1) Transmitter and one (1) Receiver as well as an IR Emitter and IR Sensor for remote control applications.

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

Installation

1. Identify the connectors on the Transmitter and Receiver as indicated on the product labels.Verify that the distance between the HDMI Transmitter and Receiver is within MuxLab specifications (see Specifications table).
2. To install the Transmitter:
   2a Connect the Transmitter to the HDMI video source with an HDMI compliant cable.
   2b Connect one (1) length of Cat 6 (or higher) grade UTP cables to RJ45 LINK connectors on the Transmitter.
3. To install the Receiver:

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

3b   Connect the one (1) Cat 6 cable to RJ45 LINK connectors on the Receiver.

4. This kit supports PoC, allowing the Transmitter to power the Receiver, or the Receiver to power the Transmitter. Connect the 12VDC power supply to either the Receiver or Transmitter first, and then plug the power supply into an AC power outlet. If power is present, the blue power LED of the Transmitter and the Receiver will be ON.

Note: Power the HDMI Extender only after all connections are made.

5. Power the HDMI equipment and verify the image quality.

6. Connect the IR Sensor to the 3.5mm Stereo Jack of the receiver and the IR Emitter 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).

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

8. 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.

9. If infrared remote control is needed to control the Display equipment from the Source, connect the IR Emitter to the 3.5mm Stereo Jack of the receiver and the IR Sensor to the 3.5mm Mono Jack of the Transmitter.

10. The following diagram shows the final configuration.
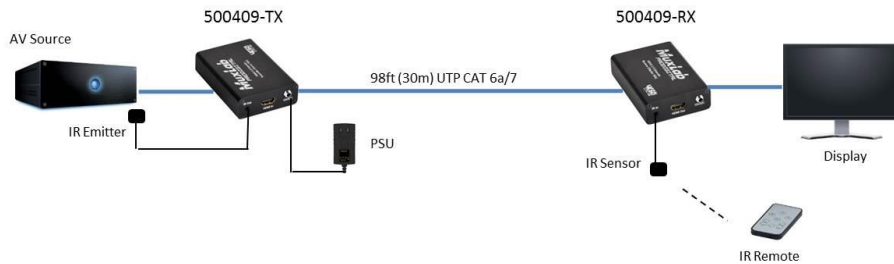
Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions in respect to the installation of the HDMI Extender Kit:

Symptom	TX LED Power/Link	RX LED Power/Link	Probable Cause	Possible Solutions
No Image	OFF	OFF	No power	• Check power connections
No Image	ON	ON	UTP or HDMI Cable	• Check the UTP Or HDMI cables.
No Image	ON	ON	Synchronization	• Check cable length.
Flickering Image	ON	ON	Synchronization	• Check cable length • Check the HDMI Cable Quality.
Choppy sound	ON	ON	Synchronization	• Check cable length • Check the HDMI Cable Quality.
Green or pink hue	ON	ON	DDC communication	• Cycle power of the HDMI Extender. • Check UTP cables and replace.
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

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).