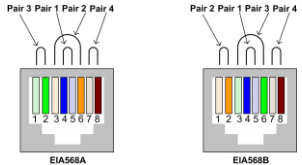


Specifications

Environment	HDMI 1.3a (Supports the 3D feature of HDMI 1.4)	
Devices	DVD, plasma, projectors, monitors, TV, PC, laptops, servers supporting HDMI.	
Transmission	Transparent to the user	
Bandwidth	225 MHz	
Signals	HDMI 1.3a protocol	
Connectors	One (1) HDMI receptacle. One (1) RJ45S for Cat 5e/6 unshielded or shielded twisted pair. Two (2) 3.5mm jacks for IR emitter and sensor <i>Note: HDMI cables not included.</i>	
Maximum Distance	720p, 1080i: Cat.6: 230 ft. (70 m); Cat.5e: 164 ft. (50 m) 1080p: Cat 5e/6: 130 ft. (40 m)	
<i>Based on a maximum length of 6.6 ft (2 m) of HDMI cable per end.</i>	<i>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.</i>	
RJ45 Pin Configuration	RJ45 Link	
<i>Reverse Polarity Sensitive. Use EIA/TIA 568A or 568B straight-through wiring.</i>	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 5e/6 or better twisted pair cables required	
Power Supply	Two (2) 110-240V/12VDC power supplies with interchangeable blades; US, UK & Euro	
Power Consumption	Transmitter: 5 Watt	Receiver: 5 Watt
Temperature	Operating: 0° to 35°C Storage: -20° to 70°C Humidity: Up to 95% non-condensing	
Enclosure	Metal	
Wall-Mount Bracket	Four (4) Wall-Mount Brackets and screws included	
Dimensions	5.00" x 2.12" x 0.67" (127 x 54 x 17 mm)	
Weight	1.4 lb (0.6 kg)	
Compliance	Regulatory: FCC, CE, RoHS	
Warranty	2 years	
Order Information	500404	HDMI / Bi-IR Extender Kit



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HDMI / Bi-IR Extender Kit 500404

Quick Installation Guide

Overview

The HDMI / Bi-IR Extender Kit (500404) allows HDMI equipment to be connected up to 130 ft (40 m) @ 1080p via one (1) Cat 5e/6 unshielded twisted pair cables in a point-to-point configuration. The kit comes with one (1) Transmitter and one (1) Receiver as well as an IR Emitter and IR Sensor for remote control applications. Four (4) mounting Ear are also provided for wall-mount 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.



2. Verify that the distance between the HDMI Transmitter and Receiver is within MuxLab specifications (see Specifications table).
3. To install the Transmitter:
 - 3a. Connect the Transmitter to the HDMI video source with an HDMI compliant cable.
 - 3b. Connect one (1) lengths of Cat 5e/6 (or higher) grade UTP cables to RJ45 LINK connectors on the Transmitter.
4. To install the Receiver:
 - 4a. Connect the Receiver to the HDMI display equipment with an HDMI compliant cable.
 - 4b. Connect the one (1) Cat 5e/6 cables to RJ45 LINK connectors on the Receiver.

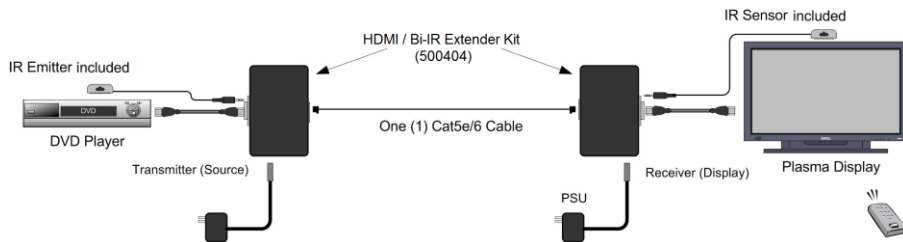
- Connect the 12VDC power supply to the Receiver first, and then plug the power supply into an AC power outlet. Connect the 12VDC power supply to the Transmitter first, and then plug the power supply into an AC power outlet. If power is present, the green power LED of the Transmitter and the Receiver will be ON.

Note: Power the HDMI / Bi-IR Extender Balun only after all connections are made.

- Power the HDMI equipment and verify the image quality. If needed adjust the equalization rotary switch.
- This product support bidirectional IR control. If infrared remote control is needed to control the Source equipment from the Display for example, 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).

- 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.
- 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.
- 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.
- The following diagram shows the final configuration.



Remote Powering

You can remote power one of the unit using the terminal block.



DIP Switch Description

The following tables describe the DIP Switch position for the EDID and Equalization

Position	Functions
0 (Default)	1080P Stereo
1	1080P 5.1
2	EDID Copy Mode (Copy EDID from Display)
3	1080i Stereo
4	1080P Stereo Long Cable Mode (LC Mode)
5	1080P 5.1 LC Mode
6	EDID Copy Mode LC Mode
7	1080i Stereo LC Mode



Position	Functions
0 to 1	0-10m transmission distance
2 to 5	10-30m transmission distance
6 to 7	30-40m transmission distance
8 to F	Reserved



Note: This table is for reference, the impedance of the cable may affect the performance as well.

Troubleshooting

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

Symptom	Tx LEDs		Rx LEDs		Probable Cause	Possible Solutions
	Power	Sync	Power	Sync		
No Image	OFF	OFF	OFF	OFF	No power	• Check power connections
No Image	ON	OFF	ON	OFF	UTP or HDMI Cable	• Check the UTP Or HDMI cables.
No Image	ON	ON	ON	ON	Synchronization	• Check cable length.
Flickering Image	ON	ON	ON	ON	Synchronization	• Check cable length • Check the HDMI Cable Quality.
Choppy sound	ON	ON	ON	ON	Synchronization	• Check cable length • Check the HDMI Cable Quality.
Green or pink hue	ON	ON	ON	ON	DDC communication	• Cycle power of the HDMI Extender. • Check UTP cables and replace.
Image flickers when powering up nearby equipment	ON	ON	ON	ON	Interference	• Use STP cables
IR not functioning	ON	ON	ON	ON	Interference from sunlight, Fluorescent, Neon or Halogen lights	• Place the IR equipment away for the interfering light
IR not functioning	ON	OFF	ON	OFF	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).