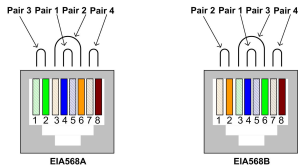


Specifications

Environment	KVM, HDMI 1.4 & USB 2.0
Devices	KVM, Monitors, TV, PC, laptops, mouse, keyboard.
Transmission	Transparent to the user.
Bandwidth	340 MHz
Signals	HDMI 1.4 protocol and USB 2.0
USB	One input on TX side and 4 outputs on RX side. Bandwidth available: Up to 250 Mb/s.
Connectors	One (1) HDMI receptacle per TX & RX unit. One (1) RJ45 for Cat 5e/6 UTP or STP per TX & RX unit. On TX: 1 standard USB connector, type B. On RX: 4 standard USB connectors, type A. Two (2) 3.5mm jacks for IR sensor & emitter per TX & RX unit. <i>Note: Cables not included.</i>
Maximum Distance	Cat 5e/6: 330 ft (100 m) up to 1920 X 1200 up to 60 Hz 330ft (100m) for 4K (3840 X 2160) up to 30Hz <i>Based on a maximum length of 6.6ft (2m) of HDMI cable per end.</i> <i>Note: A minimum CAT5e/6 cable length of 12ft (4m) is required. When installed in an electrically noisy environment, an STP cable must be used.</i>
RJ45 Pin Configuration	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)  <i>Reverse Polarity Sensitive. Use EIA/TIA 568A or 586B straight-through wiring.</i>
Cable	One (1) Cat 5e/6 or better twisted pair cable required.
Power Supply	Two (2) 110-240V/5VDC power supplies with interchangeable blades
Power Consumption	Transmitter: 3 Watts Receiver: 7 Watts + USB power
Temperature	Operating: 0° to 40°C Storage: -20° to 85°C Humidity: Up to 95% non-condensing
Enclosure	Aluminum casting with plastic side panel.
Dimensions	4.50" x 3.00" x 1.25" (11.4 x 7.6 x 3.2 cm)
Weight	2.6 lb. (1.2 kg)
Compliance	Regulatory: FCC, CE, RoHS Flammability: 94V0
Warranty	2 years
Accessories	500998 IR Emitter and 500994 IR Sensor
Ordering Information	500457 HDMI/USB 2.0 Extender Kit



HDMI/USB 2.0 Extender Kit 500457 Quick Installation Guide

Overview

The HDMI/USB 2.0 Extender Kit allows one HDMI 1.4 and one USB 2.0 channel to be transmitted up to 330ft (100m) at all resolutions up to 3840 X 2160 @ 30Hz (including 1920x1200) via one (1) Cat 5e/6 cable in a point-to-point configuration. The receive side includes a 4-port USB 2.0 hub, supporting KVM applications.

Applications

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

Installation

- 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.
- Verify that the distance between the HDMI/USB 2.0 Transmitter and Receiver is within MuxLab specifications.
- To install the Transmitter:
 - Connect the Transmitter to the HDMI video source with a HDMI compliant cable.
 - Connect the Transmitter to the USB signal with a standard USB 2.0 cable.
 - Connect a Cat 5e/6 (or higher) grade UTP cable of desired length within specifications to the RJ45 LINK connector on the Transmitter.



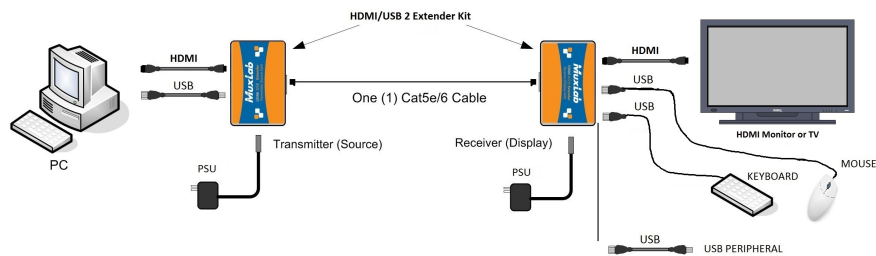
2321 Cohen Saint-Laurent, QC, Canada H4R 2N7

Tel: (514) 905-0588 Fax: (514) 905-0589

Toll Free (North America): (877) 689-5228

E-mail: info@muxlab.com URL: www.muxlab.com

4. To install the Receiver:
 - 4a. Connect the Receiver to the HDMI display equipment with a HDMI compliant cable.
 - 4b. Connect the Receiver to as many as four (4) USB 2.0 peripherals with standard USB 2.0 cables. Power is limited to 0.7A for the four (4) ports. An externally powered four (4) port USB 2.0 hub may allow for expansion, or to support higher power levels than 0.7A total.
 - 4c. Connect the Cat 5e/6 cable coming from the Transmitter to the RJ45 LINK connector on the Receiver.
5. Connect the 5 VDC power supply to the Receiver first, and then plug the power supply into an AC power outlet. Next connect the 5 VDC power supply to the Transmitter, and then plug the power supply into an AC power outlet. If power is present, the power LED on the Transmitter and Receiver will be ON.
6. Power the HDMI equipment and verify the image quality.
7. This product supports unidirectional IR control. If infrared remote control is needed to control the Source equipment from the Display, connect the IR Sensor and/or IR Emitter to the 3.5mm Jacks of the Transmitter and Receiver.
8. 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 at the top of the IR Sensor enclosure.
9. 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.
10. The following diagram shows the final configuration.



(Note: IR sensor and emitter not shown in above diagram.)

Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions with respect to issues during the installation of the HDMI/USB 2.0 Extender Kit:

Note: The **Act LED** should blink when the unit is working. The **HDMI LED** will blink if the source contains no HDCP.

Symptom	Tx unit LEDs			Rx unit LEDs			Probable Cause	Possible Solutions
	Power	HDMI	RJ45	Power	HDMI	RJ45		
No Image	OFF	-	-	OFF	-	-	No power	Check power connections
No Image	ON	-	OFF	ON	-	OFF	UTP Cable	Check the UTP cables.
No Image	ON	OFF	ON	ON	OFF	ON	HDMI Cable	Check the HDMI cable.
No Image	ON	ON (or blink)	ON	ON	ON	ON	Cable length	Check cable length, check with another monitor.
Flickering Image or bad sound	ON	ON (or blink)	ON	ON	ON	ON	Cable length	Check cable length Check the HDMI cable.
No sound, but image OK	ON	ON (or blink)	ON	ON	ON	ON	Sound at source	Check if source or monitor is PCM or Dolby/DTS.
Image flickers when powering up nearby equipment	ON	ON (or blink)	ON	ON	ON	ON	Interference	Use STP cables
USB not working, but audio/video OK							USB 2.0 cable, or too much power required for USB peripheral.	Check USB 2.0 cable, or try another USB device.
Adding multiple USB peripherals is causing a problem.							Too much power required for USB peripherals.	Try a different USB peripheral. Try using an externally powered USB 2.0 hub.

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).