



# KVM HDMI over IP PoE Transmitter Wall-Plate, 4K/60

## Quick Installation Guide 500800-TX-WP-WH



## Table of Contents

1. Safety Precautions.....	3
2. Introduction.....	4
3. Features.....	4
4. Package Contents.....	4
5. Specifications.....	5
6. Installation.....	6
7. Troubleshooting.....	9

## 1. Safety Precautions

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for future reference.

- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burns.
- Do not open or remove the housing of the device as you may be exposed to dangerous voltage or other hazards.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture and do not install this product near water. Keep the product away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the product specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- Install the device in a place with adequate ventilation to avoid damage caused by overheat.
- Unplug the power when left unused for a long period of time.
- Information on disposal of devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

### Copyright Notice

All contents in this manual are copyrighted, and cannot be cloned, copied, or translated without the express permission of MuxLab Inc. Product specifications and information in this document are for reference only, and the content may be updated from time to time without prior notice.

## 2. Introduction

The KVM HDMI over IP PoE Transmitter Wall-Plate, 4K/60 (model: 500800-TX-WP-WH) allows HDMI & USB equipment to be connected up to 330ft (100m) over an Ethernet LAN, supports HDMI up to 4K /60Hz (4:4:4) via Cat5e/6 cable and is compatible with the MuxLab 500800-RX Receiver to support point-to-point, point-to-multipoint and multipoint-to-multipoint configurations, it also allows creating a Video Wall of user configurable size (X by Y) supporting 100's of screens, depending on network bandwidth, utilizing one Receiver for each display in the array.

The Transmitter terminates to a computer server/workstation via an HDMI & USB port, The Receiver terminates to an HDMI display and up to 4 USB devices such as a keyboard, mouse, printer, drawing pad, storage device, camera, etc., via a 4 port USB hub. A single Receiver can be switched via hotkey sequences to any Transmitter on the network, allowing a single operator to manage numerous servers/workstations, in a distributed KVM application.

## 3. Features

- One operator can manage multiple servers/workstations
- Supports HDMI up to 4K/60Hz (4:4:4)
- Supports USB 2.0
- Up to 330ft (100m) over Cat5e/6 cable
- Supports multiple point-to-point, and point-to-multipoint Applications
- Directional IR for remote control of end devices
- Supports audio insert
- Supports PoE powered, via PoE (PSE) Ethernet Switch
- Managed via Pro Digital Network Controller (500812), and Muximus Network Controller (500813)

## 4. Package Contents

- One (1) HVM HDMI over IP PoE Transmitter Wall-Plate, 4K/60
- One (1) User manual (available via download)

**Notes:** Confirm that the product and accessories are all included. If not, please contact the supplier from which you purchased the unit.

## 5. Specifications

Technical	
Environment	HDMI 2.0
Devices	Computers and servers with HDMI monitor ports.
Transmission	Transparent to the user
Bandwidth (HDMI)	597MHz
Signals	HDMI 2.0 protocol, HDCP 1.4, HDCP 2.2
HDR Color	HDR10 & Dolby Vision
Connectors	One (1) HDMI IN connector for AV input. One (1) RJ45S for Cat 5e/6 unshielded or shielded twisted pair. One (1) 3.5mm jacks for audio-in One (1) 3.5mm jack for directional Infrared port. One (1) USB Type B Connector for Host device One (1) 2.1mm power connector
Maximum Distance Based on a maximum length of 6.6ft (2m) of HDMI cable per end.	Cat5e/6: 330ft (100m) from Ethernet Switch. Unlimited over the Internet <b>Note:</b> 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), maximum 2 frames (33ms)
Compression	JPEG 2000
Bandwidth	Up to 850 Mbps
Network Requirement	1000BaseT
<b>RJ45 Pin Configuration</b> Reverse Polarity Sensitive. Use EIA/TIA 568A or 586B straight-through wiring.	<b>RJ45 Link</b> 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 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 may be purchased separately.
PoE Standard	IEEE 802.3af
Power Consumption	6 Watt
Temperature	Operating: 0° to 40°C      Storage: -20° to 85°C Humidity: Up to 95% non-condensing
Dimensions (W, D, H)	(110mm x 55mm x 105mm)
Weight	0.63lbs (1.38kg)
Compliance	Regulatory: FCC, CE, RoHS      Flammability: 94V0
Warranty	2 years
Order Information	500800-TX-WP-WH KVM HDMI over IP PoE Transmitter Wall-Plate, 4K/60 (UPC: 627699928004)

## 6. 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 (500800-TX-WP-WH):
  - 3a. Connect the Transmitter to the computer server/workstation HDMI video source with an HDMI compliant cable.
  - 3b. Connect the Transmitter USB Port to the computer server/workstation USB port, using a compliant Type A to Type B USB Cable.
  - 3c. If required, connect the computer audio-out to the Transmitter audio-in.
  - 3d. If the application is point-to-point, then connect one (1) length of Cat 5e/6 (or higher) grade UTP cable to the RJ45 LINK connector on the Transmitter. If transmitting over the network, use an Ethernet Switch between Transmitter and Receiver.
4. To install the Receiver (500800-RX):
  - 4a. Connect the Receiver HDMI port to the Monitor HDMI port with a HDMI compliant cable.
  - 4b. 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.
  - 4d. If required, connect the Receiver audio-out to an amplified speaker.
  - 4e. 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.
5. If the configuration is a multiple point-to-point (including point-to-multipoint) architecture:
  - 5a. You will need to use an Ethernet Switch with Gigabit ports and DHCP Server support. In addition Jumbo Frame support is required. Verify that the Ethernet Switch is configured correctly and that the DHCP Server is enabled and that Jumbo Frame is enabled. 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 you are using the Pro Digital Network Controller (500812) or the Muximus Network Controller (500813).

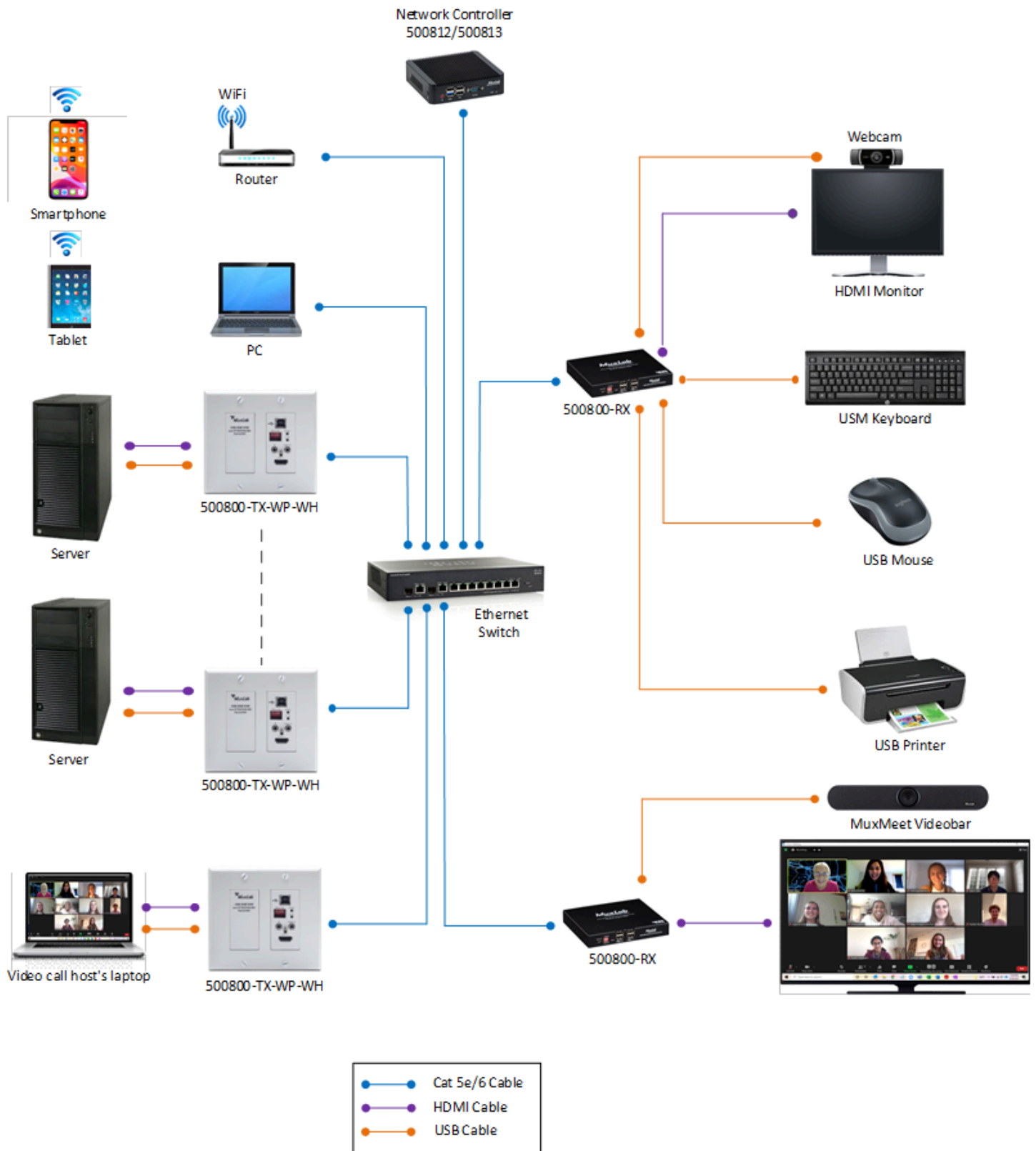
6. The Transmitter and Receiver supports a directional IR port that can be utilized if required to transport control signals to control end devices.
7. Powering the Transmitter or Receiver via an external power supply is only necessary where PoE (PSE) is unavailable. If PoE is unavailable, connect a 5 VDC power supply to each Receiver and to an AC power outlet. Next connect each Transmitter in the same manner. If power is present, the blue power LED on each Transmitter and Receiver will illuminate.

**Note:** Power 'ON' the KVM HDMI over IP PoE Transmitter are , 4K@60 only after all connections have been made.

8. This product supports IR 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. Blu-Ray 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. Power 'ON' the HDMI equipment and verify the image quality, sound if applicable, keyboard and mouse functionality, as well as any additional USB connected devices.
12. The following diagram illustrates a typical KVM LAN configuration.





## 7. Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions in regard to the installation of the KVM HDMI over IP PoE Transmitter Wall-Plate, 4K/60 and Receiver:

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"> <li>• Check power connections</li> <li>• Check PoE Ethernet Switch Setup</li> </ul>
No Image	BLINK	OFF	BLINK	ON	Bootting	<ul style="list-style-type: none"> <li>• Wait until booting process is finished</li> </ul>
No Image	ON	OFF	ON	OFF	No Ethernet Link	<ul style="list-style-type: none"> <li>• Check Ethernet Switch Status</li> <li>• Check UTP Cables</li> </ul>
Info Screen	ON	OFF	ON	BLINK	UTP Cable	<ul style="list-style-type: none"> <li>• Check the Transmitter UTP cable</li> </ul>
Info Screen	ON	ON	ON	OFF	UTP Cable	<ul style="list-style-type: none"> <li>• Check the Receiver UTP cable.</li> </ul>
Info Screen	ON	BLINK	ON	BLINK	No Data Connection	<ul style="list-style-type: none"> <li>• Check if DIP Switch settings match</li> </ul>
Info Screen	ON	ON	ON	BLINK	Wrong setting on Receiver	<ul style="list-style-type: none"> <li>• Check DIP Switch address of the Receiver</li> </ul>
Choppy Video	ON	ON	ON	ON	Configuration	<ul style="list-style-type: none"> <li>• Check cable length</li> <li>• Check the HDMI Cable Quality</li> <li>• Check if IGMP is enabled on the Ethernet Switch</li> </ul>
Image flickers when powering up nearby equipment	ON	ON	ON	ON	Interference	<ul style="list-style-type: none"> <li>• Use STP cables</li> </ul>
IR not functioning *	ON	ON	ON	ON	Interference from sunlight, Fluorescent, Neon or Halogen lights	<ul style="list-style-type: none"> <li>• Place the IR equipment away for the interfering light</li> </ul>
IR not functioning *	ON	ON	ON	ON	Interference from RF radiation from the TV	<ul style="list-style-type: none"> <li>• Place the IR equipment away for the RF radiation</li> </ul>

\* 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).



KVM HDMI over IP PoE Transmitter Wall-Plate, 4K/60  
500800-TX-WP-WH

2321 Cohen | St-Laurent , H4R 2N7 | Québec, Canada Tel: 514-905-0588 | Fax:  
514-905-0589 | Toll free: 1-877-689-5228 info@muxlab.com |  
salesteam@muxlab.com | www.muxlab.com

Follow us:    