Specifications

<table>
<thead>
<tr>
<th>Environment</th>
<th>DVI 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devices</td>
<td>Computers and servers with DVI monitor ports.</td>
</tr>
<tr>
<td>Transmission</td>
<td>Transparent to the user</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>300MHz</td>
</tr>
<tr>
<td>Signal</td>
<td>DVI 1.0 protocol, HDCP 1.4</td>
</tr>
</tbody>
</table>

Connect one (1) length of Cat 5e/6 (or higher) UTP cable to the RJ45 Link connector on the Transmitter (500993) may be purchased as kits or purchased separately depending on the grade of twisted cable used.

| Note: Cables not included |

Maximum Distance
Based on a maximum length of 6.6 ft (2m) of DVI cable per end.

Latency
One (1) Frame (16ms) @ 60Hz (typical)

Compression
JPEG 2000

Network Bit Rate
300Mbps (typical)

Network Requirement
100BaseT with PoE

RJ45 Pin Configuration
Reverse Polarity Sensitive.
Use EIA/TIA 568A or 568B straight-through wiring.

<table>
<thead>
<tr>
<th>RJ45 Link</th>
<th>Pin 1 (R)</th>
<th>Pin 2 (T)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin 3 (R)</td>
<td>Pin 6 (T)</td>
<td></td>
</tr>
<tr>
<td>Pin 4 (R)</td>
<td>Pin 5 (T)</td>
<td></td>
</tr>
<tr>
<td>Pin 7 (R)</td>
<td>Pin 8 (T)</td>
<td></td>
</tr>
</tbody>
</table>

| 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 (500993) may be purchased separately.

PoE Standard
IEEE 802.3af

Power Consumption
Transmitter: 2.85Watt 
Receiver: 2.55Watt

Temperature
Operating: 0° to 40°C 
Storage: -20° to 85°C

Humidity
Up to 95% non-condensing

Dimensions
4.40” x 5.08” x 1.00” (112mm x 129mm x 25mm)

Weight
1.5lbs (0.68kg)

Compliance
Regulatory: FCC, CE, RoHS 
Flammability: 94V0

Warranty
3 years

Order Information
500771 KVM DVI over IP PoE Extender Kit 
500771-TX KVM DVI over IP PoE Extender TX 
500771-RX KVM DVI over IP PoE Extender RX

Accessories
(These items are sold separately)
500920 16-Port Rackmount Transceiver Chassis 
500917 Wall Mount Transceiver Bracket Kit 
500993 Univ. Locking Power Supply 5VDC/2.6A US/UK/EU Blade

KVM DVI over IP PoE Extender Kit
500771
Quick Installation Guide

Overview
The KVM DVI over IP PoE Extender Kit allows DVI & USB equipment to be connected up to 330ft (100m) up to 1080p resolution @ 60Hz and 1920x1200 @ 60Hz via one (1) Cat5e/6 unshielded twisted pair cable in a point-to-point configuration. The Transmitter (500771-TX) and Receiver (500771-RX) also support PoE (PD) if used with a PoE (PSE) Ethernet Switch. The kit comes with one (1) Transmitter and one (1) Receiver. Additional Transmitters and Receivers may be purchased as kits or purchased separately depending on the number of units required.

For multiple point-to-point (including point-to-multipoint) configurations the Ethernet Switch must have Gigabit ports, Jumbo Frame capability and DHCP Server capability. MuxLab recommends using the Cisco SG300 Series Managed Switches.

The MuxLab ProDigital Network Controller (500811) is available to simplify the configuration and utilization of the 500771 and other MuxLab IP based products via an Ethernet web interface.

Applications
Applications include management of multi-server systems supporting DVI displays in IT departments within corporations, educational institutions, CAD Design, Graphic Design, Media Servers, and Data Centers.

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 DVI Transmitter and Receiver is within MuxLab specifications (see Specifications table for more details).
3. To install the Transmitter:
   3a. Connect the Transmitter DVI port to the Computer DVI port, with a DVI compliant cable.
   3b. Connect the Transmitter USB Port to the Computer USB port, using a compliant Type A to Type B USB Cable.
   3c. If required, connect the computer audio-out and mic-in port to the Transmitter audio-in and mic-out port, respectively.
   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.

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4. To install the Receiver:
   4a. Connect the Receiver DVI port to the Monitor DVI port with a DVI 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 and mic-in port to an audio/mic system audio-in and mic-out port, respectively.
   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 the MuxLab Pro Digital Network Controller (500811) is used.

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 KVM DVI over IP PoE Extender Kit only after all connections have been made.

7. Power ‘ON’ the DVI equipment and verify the image quality, sound if applicable, keyboard and mouse functionality, as well as any additional USB connected devices.

8. There are two basic hot key methods to switch a Receiver among different Transmitters. One method is via an OSD (On Screen Display) menu, which can be called up by pressing the hotkey sequence “Scroll Lock” three times in less than 0.5 seconds. This brings up the OSD menu to select which Transmitter to connect with. The second method is via 16 different hotkey sequences, with each one providing direct access to a preconfigured Transmitter. This is available by pressing the CTRL Key with the port number pressed three times within 0.5 seconds. Port numbers follow the switch setting and are from 0 to 9 and q (10), w (11), e (12), r (13), t (14) and y (15). Hotkeys can be modified from the device web server interface; to find the IP address of the product use Bonjour Protocol.

9. Please download and reference the 500771 Operation Manual found on the MuxLab website (under the 500771 webpage) for further instructions on how to operate this device, including how to configure and use the hotkeys and OSD.

10. The following diagram illustrates a typical point-to-point LAN configuration.

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**Troubleshooting**

The following table describes some of the symptoms, probable causes and possible solutions in regard to the installation of the KVM DVI over IP PoE Extender Kit:

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Transmitter LEDs</th>
<th>Receiver LEDs</th>
<th>Probable Cause</th>
<th>Possible Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Image</td>
<td>OFF</td>
<td>OFF</td>
<td>No power</td>
<td>Check power connections</td>
</tr>
<tr>
<td>No Image</td>
<td>BLINK</td>
<td>OFF</td>
<td>Booting</td>
<td>Wait until booting process is finished</td>
</tr>
<tr>
<td>No Image</td>
<td>ON</td>
<td>OFF</td>
<td>No Ethernet Link</td>
<td>Check Ethernet Switch Status</td>
</tr>
<tr>
<td>Info Screen</td>
<td>ON</td>
<td>OFF</td>
<td>UTP Cable</td>
<td>Check the Receiver UTP cable</td>
</tr>
<tr>
<td>Info Screen</td>
<td>ON</td>
<td>ON</td>
<td>UTP Cable</td>
<td>Check the Receiver UTP cable</td>
</tr>
<tr>
<td>Info Screen</td>
<td>ON</td>
<td>BLINK</td>
<td>No Data Connection</td>
<td>Check if DIP Switch settings match</td>
</tr>
<tr>
<td>Info Screen</td>
<td>ON</td>
<td>ON</td>
<td>BLINK</td>
<td>Wrong setting on Receiver</td>
</tr>
<tr>
<td>Chopp Video</td>
<td>ON</td>
<td>ON</td>
<td>Configuration</td>
<td>Check cable length</td>
</tr>
<tr>
<td>Image Flickers</td>
<td>ON</td>
<td>ON</td>
<td>Interference</td>
<td>Use STP cables</td>
</tr>
<tr>
<td>Mouse or Keyboard</td>
<td>ON</td>
<td>ON</td>
<td>USB Cable</td>
<td>Check the USB Cable Quality</td>
</tr>
<tr>
<td>USB Speed Slow</td>
<td>ON</td>
<td>ON</td>
<td>Wrong Port</td>
<td>Check that any additional USB devices are connect to the USB 2.0 Port</td>
</tr>
</tbody>
</table>

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).