**Quick Start Guide**

HDMI-TPS-TX95
DVI-HDCP-TPS-TX95
DVI-HDCP-TPS-RX95

**Connecting Steps**

1. **Touch panel**
2. **Laptop**
3. **Ethernet switch**
4. **IR detector**

**HDMI-TPS-TX95**
- Connect the TPS output port of the Transmitter to the TPS input port of the Receiver by a CATx cable.

**HDMI-TPS-RX95**
- Connect a source to the HDMI (DVI-D) input port of the transmitter.
- Connect an IR emitter unit to the IR input port of the transmitter.
- Connect a control device to the local RS-232 port of the transmitter.
- Optionally connect a laptop to the Ethernet port of the transmitter.
- Connect a serial device to the HDMI (DVI-D) output port of the receiver.
- Connect a control device to the RS-232 port of the receiver.
- Connect the receiver to Ethernet by a CATx cable.
- IR: Connect an IR detector unit to the IR input port of the receiver.

**Powering Options**

- Connect any third party device to the extender with remote powering!
- AWG 26 cables are not recommended with remote powering (reduce cable distances).

**Mounting Options**

- **Under Desk Mounting Kit (UD-kit)**
  - The UD-kit makes it easy to mount one extension under any flat surface (e.g., furniture).

- **UD Mounting Kit Double (UD-kit double)**
  - The UD-kit double makes it easy to mount two extensions under any flat surface (e.g., furniture).

**Remote Power Options**

- The TPS extenders can be powered remotely by their TPS matrix board. This feature can be enabled or disabled with jumper settings. Switch off the extenders. Loosen the screws and remove the small plate from the right side of the enclosure. To enable the remote power function, place the jumper block onto all pinheads of the desired port. To disable it, remove the jumper block. For detailed information, see the user's manual of the matrix.

**Mounting Steps**

- **Always use the screws which are supplied with the mounting accessory.**
- **If you insert screws longer than 6 mm, the device may be damaged.**

  - 1. Unplug all the cables connected to the device(s).
  - 2. Turn the device(s) upside down.
  - 3. Put the shelf upside down on the device(s). Position it to get the mounting holes aligned.
  - 4. Fasten the device on the shelf with the provided screws.
  - 5. Place the shelf to the desired place (screws are not supplied).

**Front View**

**Rear View**

**Front and Rear View – Legend**

1. **RS-232 port**
   - Local RS-232 port for bidirectional serial data connection and performing firmware upgrade (programming).

2. **RS-232 switch**
   - Normal: serial data is passed through the device.

3. **Status LEDs**
   - See the next section.

4. **TPS mode switch**
   - LR: Long reach TPS mode; lower resolution (max. 1080i).

5. **IR input**
   - IR signal input connector (for 3.5 mm Jack, 3-pole, TRS plug).

6. **IR output**
   - IR signal output connector (for 3.5 mm Jack, 2-pole, TS plug).

7. **DC input**
   - 12V DC input for local power supply.

8. **Ethernet port**
   - The Ethernet data is passed through the device.

9. **TPS port**
   - TPS port to the other compatible device (extender / matrix / board).

10. **HDMI port**
    - Video port for DVI or HDMI signal.

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TPS Link Modes

TPS working mode between the transmitter and the receiver parties is determined by the mode set in them. Both parties influence on the setting which determines the final TPS transmission mode. The following TPS modes are defined:

- **Long reach (LR):** Long CATx cable length, less bandwidth (limited resolution). The LPPF mode is not available in LR TPS link mode.
- **HDBaseT™ (HDBT):** more bandwidth (higher resolutions), shorter CATx cable length. If no video present, the channel enters LPPF mode automatically.
- **Low Power Partial Functionality (LPPF):** Only Ethernet, RS-232 and IR are extended.

**Setting the TPS modes:**

1. The toggle switch on the extenders can be used to toggle between the LR and Auto TPS modes. If both units have Auto mode set and there is valid video signal on the transmitter the common mode will be HDBT. If there is no valid video signal the channel enters LPPF mode.

2. TPS mode between an extender and a port of a matrix board is fixed if the TPS port is enabled. The LR, Auto and Auto LR modes are not available. The LR, Auto, Auto LR and Auto LR HDBT modes are enabled depending on the selected inputs.

3. Always use the Auto mode with third-party devices!

**Toggling Between TPS Link Modes**

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The TPS mode switch in the extender can have four settings:

- **LR**: Long reach mode with the limited bandwidth.
- **Auto**: Auto mode which is a combination of LR and Auto LR mode.
- **Auto LR**: Auto LR mode.
- **Auto LR HDBT**: Auto LR HDBT mode.

**Bi-directional Pass-through Data Lines**

The direction of the video extension is fixed from TX towards RX but the pass-through data lines are bi-directional. It means the RS-232, IR, Ethernet source and sink devices can be connected either to the TX or the RX.

**Ethernet**

The Ethernet port on the RX or TX can be connected to a LAN hub, switch or router with a LAN cable. The other side behaves as an Ethernet uplink port. Extenders support 10/100 Mbit/sec data transfer rate. The direct access is also supported with cross-link cable. The Ethernet port has auto crossover function. It is able to recognize and handle both cable types: patch and cross TP cables.

**RS-232**

Third party devices with standard RS-232 port are supported as the extenders work in pass-through mode. TX and RX provide 9-pole D-sub female connector. Use straight-cable to connect a D/E device to an extender and use a cross serial cable in case of pairing a DCE device to the other TPS extender. The RS-232 options – the baud rate and the parity bits are set on the third party devices and it can be anything. The extenders support any kind of serial device to the other TPS extender. The RS-232 options – the baud rate and the parity bits are set on the third party devices and it can be anything. The extenders support any kind of serial device to the other TPS extender.

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**Infra-Red (IR)**

One emitter and one detector is enough for remote controlling one IR sink device. If there is an IR sink device to be controlled next to the TX and the other one is next to the RX, two emitter-detector pairs are needed. The IR emitter and the detector have standard 3.5 mmTRS (jack) connectors. The emitter's plug has two poles (mono) and the detector's plug has three poles (stereo).

**Remote Power Options**

The TPS extender can be powered remotely by the connected TPS matrix board or its extender pair. This feature can be enabled or disabled with jumper settings for every port separately. Switch off the matrix. Remove the desired cards. Pinheads are behind of the TPS connectors. To enable the remote powering function of the port place the jumper block onto all the corresponding pinheads. Connect the external 12V DC 6.7A power adapter to the card separately. Finally, set the extenders' desired power modes. To disable the remote powering function for a port remove the jumper block from the corresponding pinheads.

**Jumper Settings**

Place the jumper blocks onto all the pinheads of those units which you want to be powered remotely. For disabling the remote powering remove the jumper blocks and place them onto the upper line pinheads only.

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