

Ultra-Low Power HDMI1.4b ReDriver/Level Shifter

This device is ideal solution to extend system's battery operation hours with typical 2uA standby and 80mA power supply current, comparing to the Retimer device. The ReDriver amplifies and reshapes AC and DC coupled input signals to the HDMI1.4b compliant signals at the HDMI or dual-mode source side systems. Programmable input equalization helps to solve the compliance jitter issues, creating in the non-standard HDMI source system with robust ESD/EOS protection of 8kV

- Notebook and Desktop computers
- Video streaming devices
- A/V receivers, Switch boxes and Dongle

[illegible]

- Ultra-Low power HDMI 1.4b compliant ReDriver with dual mode Level Shifter
- Operation up to 3.4 Gbps per lane
- Max 4K resolution (4096 x 2160 at 30fps), 48-bit per pixel Deep Color supports
- Standby current typical 2uA
- Flexible three steps equalization control (2.5, 5, 7.5 dB) and Pre-emphasis control 3 steps (0, 1.5, 2.5 dB)
- Automatic output squelch and HPD detection for power saving states management
- DC coupled or AC coupled differential inputs
- Integrated DDC level shifter
- Single power supply: 3.3V
- Integrated ESD protection on I/O pins. 8kV contact and 8kV HBM
- Package: 32-pin TQFN(ZLS32, 3x6mm)
- Pin-to-pin compatible with PI3HDMI511 and PI3HDX511A

The diagram illustrates a system architecture for a Source-side ReDriver. It consists of three main components connected in a linear fashion:

- HDMI Source System:** Represented by a large rectangle with a dashed inner boundary.
- Source-side ReDriver:** A central component box containing a logo and the text "Source-side ReDriver".
- HDMI Sink System:** Represented by a large rectangle with a solid inner boundary.

The connections are as follows:

- A solid line connects the **HDMI Source System** to the **Source-side ReDriver**.
- A small square connector on the right side of the **Source-side ReDriver** is connected to an **HDMI Connector** (represented by a circle with a horizontal line through it).
- Another **HDMI Connector** is connected to a small square connector on the left side of the **HDMI Sink System**.