



KEY FEATURES

HDMI/DVI Source Repeater

- Compliant with HDMI 1.3a specification up to 2.25 Gbps
- Programmable receiver equalization to compensate PCB and/or connector losses
- Integrated Active Receiver termination of 50-ohm +/-10%
- Low Intra-pair and Inter-pair skews
- Built-in active DDC buffer with 5V tolerance
- Local I2C Control for flexible feature selection and host interface

General

- Single 3.3V Power Supply, 48-pin QFN RoHS Package
- 0°C to 70°C Operating Temperature Range
- DC Coupling Receiving Capable
- ESD: Human Body Mode at 8 kV, Machine Mode at 400 V, and Charged Device Mode at 2 kV

APPLICATIONS

- PC Motherboard / Graphics Card
- Docking Station
- Digital Set-Top-Box
- 1-to-1 HDMI/DVI Repeater

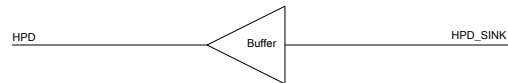
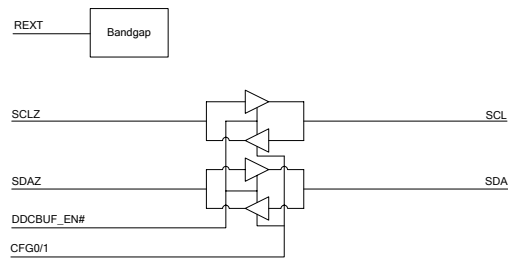
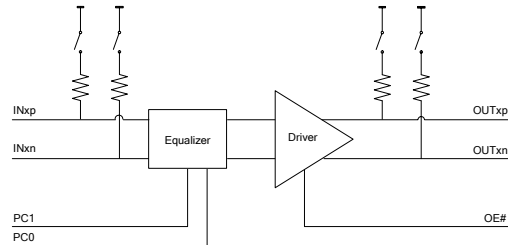
GENERAL DESCRIPTION

PS8121 integrates 1-to-1 HDMI/DVI Repeater to simplify system level design and reduce system level cost for applications requiring single HDMI/DVI input and single output device in personal computing system and other emerging digital appliances.

A precision resistor is connected from REXT pin to ground for output swing control and for termination resistor calibration. The output is at high impedance when OE# is set at logic high in pin control mode.

Different level receiving equalizations can be set either by pin or by local control I2C to compensate different PCB traces losses.

FUNCTIONAL BLOCK DIAGRAM



HDMI/DVI Source Repeater

Receiver inputs are terminated with integrated active 50 ohm pull-up resistors connected to AVCC. The DDC I2C signals are bidirectional and are buffered actively to reduce I2C bus loading. The active DDC buffer can also function as a level shifter. The active I2C buffer or level shifter is high impedance when DDCBUF_EN# is high. The configuration select pins CFG0/CFG1 provide the flexibility of adjusting the output voltage level of SCLZ/SDAZ to optimize noise margins.

Rev.0

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