



**PS8101/PS8101T**

**KEY FEATURES**

- AC coupling receiving capable
- Programmable Receiving Equalization to Compensate PCB trace losses
- Integrated Active Termination with high impedance selectable
- Integrated Inverting Level Shifter for HPD# output (PS8101T only)
- High receiving sensitivity (typically 35mV receiving capable)
- Accurately controlled output swing (Compliance Testing with good margin)
- Low Intra-pair and Inter-pair output skews
- Built-in Side-band Signals level shifter
- Support both DDC Active buffering and Passive switch for Side-band Signals (PS8101 only)
- Single 3.3V Power Supply, 48-pin QFN RoHS Package
- 0°C to 70°C Operating Temperature Range
- ESD: Human Body Mode at 8 kV, Machine Mode at 400 V, and Charged Device Mode at 3 kV

**APPLICATIONS**

- PC Motherboard / Graphics card
- Docking Station

**GENERAL DESCRIPTION**

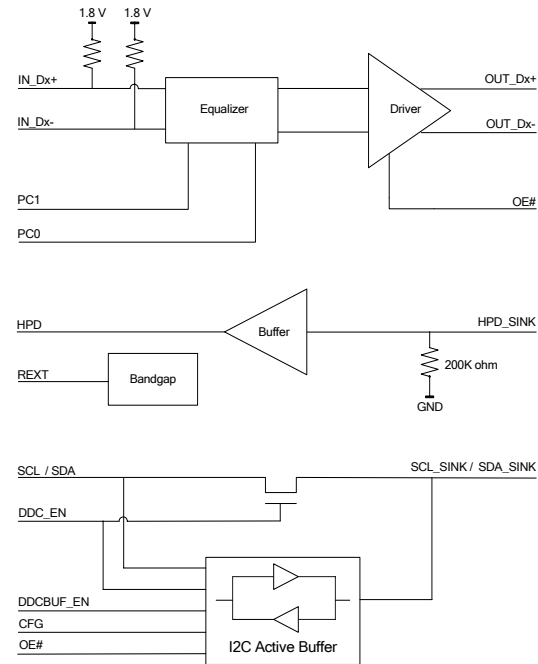
PS8101 (PS8101T) integrates 1-to-1 HDMI/DVI Level Shifter to simplify system level design and reduce system level cost for applications requiring HDMI/DVI level shifting in personal computing system and other emerging digital appliances.

The main link TMDS signaling shall be AC coupled to the PS8101 (PS8101T). The DDC I2C signals are bidirectional and 5 V tolerant. HPD (HPD#) is not affected by OE#.

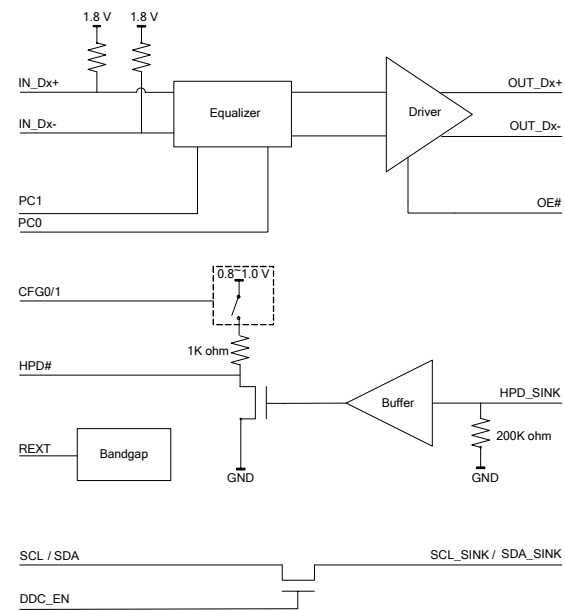
Receiver inputs are terminated with integrated active 50 ohm pull-up resistors which can be set to high impedance by pin RT\_EN#. A precision resistor is connected from REXT pin to ground. The output is at high impedance when OE# is at HIGH.

The PS8101 (PS8101T) supports four level equalizations of 0-dB, 4-dB, 8-dB and 12-dB programmable by PC0 and PC1 pins. The 4-dB equalization setting is recommended for PC motherboard level shifting to compensate PCB trace losses.

**PS8101 FUNCTIONAL BLOCK DIAGRAM**



**PS8101T FUNCTIONAL BLOCK DIAGRAM**



Rev.0

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