



PS171 DisplayPort™ to HDMI™/DVI Converter

HDMI 1.4b Compatible with 300MHz TMDs Clock Support

Product Brief

PS171

FEATURES

- Integrates a complete DisplayPort™ receiver and complete HDMI/DVI transmitter for video format conversion
- Fully compliant HDMI output, up to 300 MHz TMDs clock
- Fully compliant DisplayPort input, video and audio
- Full HDCP 1.3 content protection support
- RGB at 6/8/10/12 bpc (bits-per-component) supported
- YCbCr 4:4:4 and YCbCr 4:2:2 8/10/12 bpc supported
- Audio input formats: 8-ch LPCM, compressed audio (AC-3, DTS) and HBR audio format Up to 24-bit audio sample size and 192 kHz sample rate
- Includes on-chip microprocessor with SPI ROM interface
- 1.2V Core Power Supply & 3.3V I/O Power Supply
- Internal crystal oscillator
- ESD: HBM 8kV at connector pins and 5kV for all other pins
- 56-pin QFN package

DisplayPort Receiver Capability

- Supports 1, 2, and 4 lanes, at 1.62Gbps and 2.7Gbps
- Supports full link training and no link training operation
- Supports DisplayPort Spread Spectrum Clocking

DVI and HDMI Transmitter Capability

- HDMI 1.4b transmitter, up to 3.0Gbps data rate (300MHz TMDs clock) supporting 3D 1080p and 4K x 2K

GENERAL DESCRIPTION

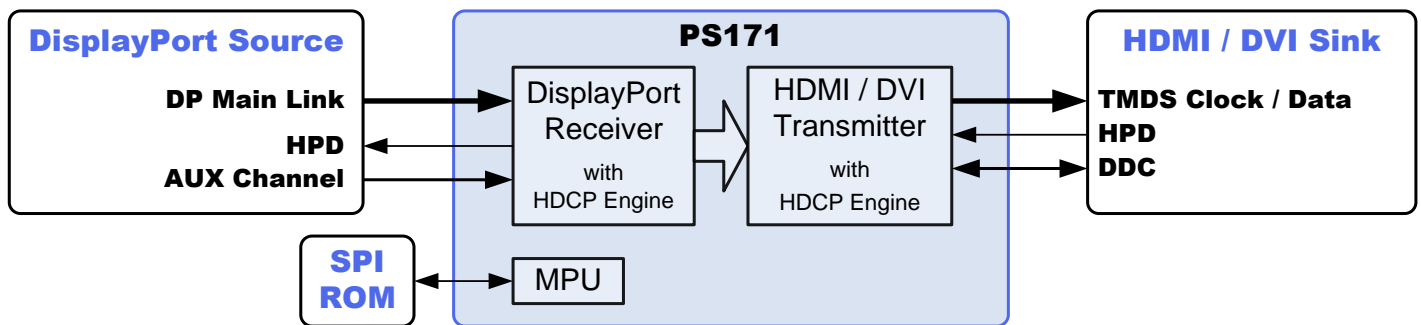
The PS171 is a new generation DisplayPort™ to HDMI™/DVI converter that receives both video and audio streams from an upstream DisplayPort Source link and converts to an HDMI or DVI output. The HDMI transmitter is compliant to the HDMI 1.4b specification and supports video formats using TMDs clock rates up to 300MHz (3.0Gbps TMDs data rate).

The PS171 fully supports content protection with integrated HDCP Rx & Tx key ROM and HDCP repeater support. Chip control is available through a dedicated I2C slave input, and an I2C master interface is available for external EDID and expansion functions.

The PS171 integrates both HDCP Rx & Tx keys to support DisplayPort branch functions including a DisplayPort-to-HDMI or DisplayPort-to-DVI active protocol converter function, or video adapter.

APPLICATIONS

- Docking device
- Enablement of DisplayPort input for CE device
- Active Protocol DisplayPort-to-HDMI Video Adapter
- Active Protocol DisplayPort-to-DVI Video Adapter



Rev. 1

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