

STDP2690 DisplayPort1.2a to Dual mode Converter

■ GENERAL DESCRIPTION

The STDP2690 is a high-speed DisplayPort-to-DisplayPort dual mode converter targeted for Mobile PC, TV and cable accessory applications. This device includes a VESA DP Standard Ver.1.2a compliant receiver and a DP1.2 dual mode transmitter. This device also functions as DP-to-DP re-timer.

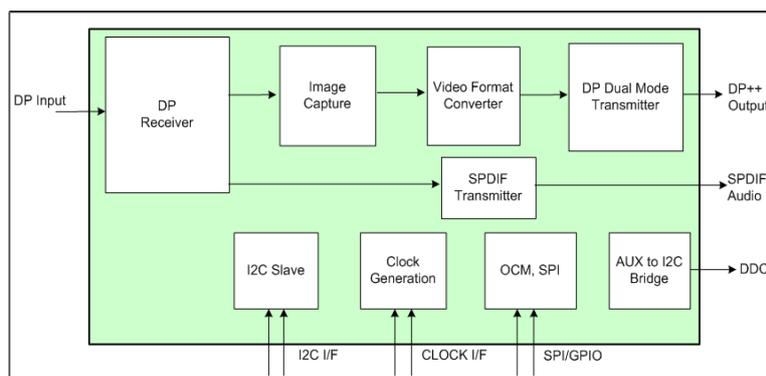
The DisplayPort receiver and transmitter supports HBR2 speed, a data rate of 5.4 Gbps per lane with a total bandwidth of 21.6 Gbps link rate. The transmitter is capable of supporting HDMI or single link DVI output through a passive level translator (dongle). The HDMI transmitter supports link rate up to 2.97 Gbps that corresponds to a pixel rate of 297 MHz, adequate for handling video resolution up to FHD 120 Hz 3D formats or 4K2K 30Hz. This device delivers deep color video up to 16-bits per color in RGB or YCbCr color format and 8-CH audio transport from the source to audio rendering device over the DP++ or through the SPDIF output.

STDP2690 provides HDCP 1.x content protection both on the input and output port thus functions as HDCP repeater. It also supports the eDP authentication option ASSR (Alternative Scrambler Seed Reset) for embedded applications.

■ FEATURES

- DisplayPort1.2a receiver
- DisplayPort1.2a dual mode transmitter
- Protocol converter or DP re-timer up to 2.97Gpbs/Ch
- Max video resolution 4K2K 30Hz
- Steroscopic 3D forwarding
- HDCP1.x repeater with embedded keys
- ASSR- eDP display authentication
- Spread spectrum on DisplayPort interface for EMI reduction
- Deep color support- RGB/YCbCr up to 16bits per color
- AUX to I2C bridge for EDID/MCCS pass through
- Power consumption: Active 493mW; Standby 21mW
- 81 BGA (8mm x 8mm) package

■ BLOCK DIAGRAM



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