

## STDP2550 Mobility DisplayPort1.2a to HDMI1.4 Converter

### ■ GENERAL DESCRIPTION

The STDP2550 is a Mobility DisplayPort-to-HDMI protocol converter targeted for notebook, smartphones, tablets and accessory applications. This device includes a VESA DP Standard Ver.1.2a compliant receiver having flexible lane selection options of 1, 2 or 4 main lanes with a differential AUX CH and HPD output or a single-ended AUX\_HPDP for MyDP application. It has a HDMI 1.4 compliant transmitter with CEC and HPD support.

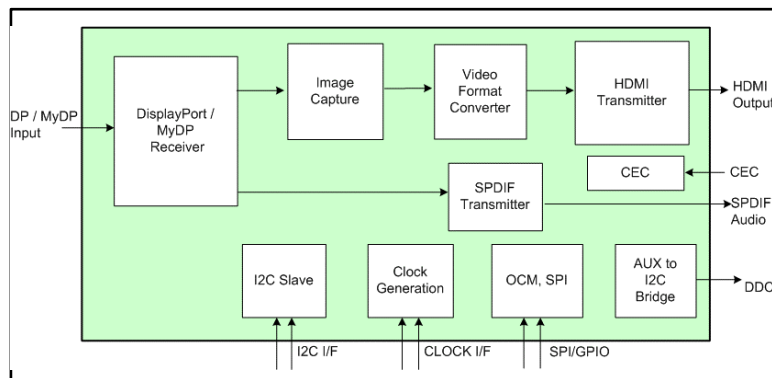
The DisplayPort receiver supports HBR2 speed, a data rate of 5.4 Gbps per lane with a total bandwidth of 21.6 Gbps link rate. The HDMI transmitter supports link rate up to 2.97 Gbps that corresponds to a pixel rate of 297 MHz, adequate for handling video resolution up to FHD 120 Hz 3D formats or 4K2K 30Hz. In MyDP applications, it can deliver 1080p 60 Hz video with a color depth of 24 bits per pixel and audio up to 8-channel at 192 Kb sample rate from a MyDP source to HDMI TV. STDP2550 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.

The MyDP standard is a digital audio-video interconnect based on the VESA DisplayPort standard for a mobile source device capable of streaming uncompressed audio and video. It uses standard 5-pin micro-USB or similar connectors commonly seen in mobile Phones and tablets for simultaneously charging and streaming audio-video to an external display.

### ■ FEATURES

- DisplayPort1.2a / MyDP1.2a receiver
- HDMI1.4 transmitter
- Protocol converter up to 2.97Gbps/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 462mW; Standby 21mW
- 81 BGA (5mm x 5mm) package

### ■ BLOCK DIAGRAM



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