



PS8402A Jitter Cleaning 3.0Gbps HDMI™ Repeater

Product Brief

PS8402A

KEY FEATURES

- Compliant with VESA Dual-Mode DisplayPort Standard, version 1, for Type 2 cable adaptor applications
- Includes the required Type 2 cable adaptor identification and control registers and I2C-over-AUX translation
- Compliant to HDMI 1.4b specification up to 3.0Gbps (300MHz TMDS Clock)
- Supports 4K x 2K and 1080p Stereo 3D HDMI formats
- Clock and Data Jitter Cleaning – 12dB Jitter Attenuation performance for out-of-band HDMI clock jitter
- CrystalFree™ technology – no external crystal or reference clock is needed
- AC and DC input coupling capable
- Programmable receiver equalization
- Programmable TMDS output pre-emphasis and EMI reduction
- Automatic inter-pair and intra-pair de-skewing
- Automatic power down management
- Automatic output squelch circuit for fail-safe operation and power management
- Flexible pin and I2C control mode options
- 3.3V and 1.5V power supplies
- 5x5mm 40-pin TQFN package
- 0° to 70°C operating temperature range
- ESD: HBM 8 kV

GENERAL DESCRIPTION

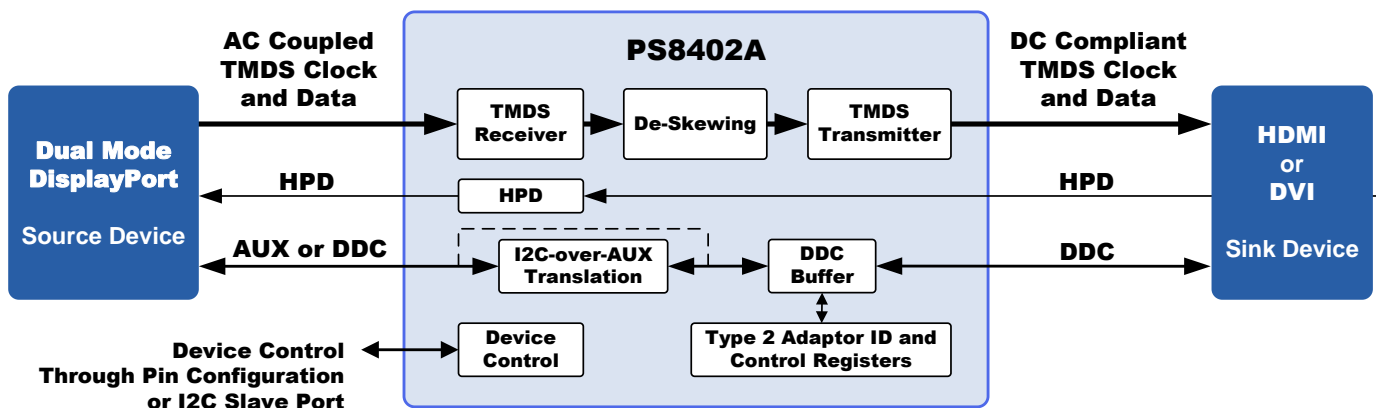
PS8402A is a single port HDMI/DVI Level Shifter/Repeater with jitter cleaning that includes features required for Type 2 Dual-mode DisplayPort (DP++) adaptor applications. It supports up to 3.0Gbps TMDS data rate and integrates a jitter tolerant TMDS receiver and a jitter cleaning TMDS transmitter. It removes the data and clock jitter and the timing skews from the TMDS input to deliver a compliant and very low jitter HDMI output.

The PS8402A includes the I2C-over-AUX translation and registers required for Type 2 DisplayPort Dual-mode adaptor implementation. The PS8402A is backward-compatible with existing Dual-mode DP Source devices as well as newer Dual-mode Sources enabled for Type 2 adaptors. The device can also be used in motherboard, graphics board or docking applications to take advantage of Type 2 adaptor video drivers.

For applications not requiring the Type 2 adaptor registers or I2C-over-AUX translation, please refer to the PS8401.

APPLICATIONS

- Type 2 Dual-Mode DP video adaptor
- PC mother board or graphics card
- Docking station



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