

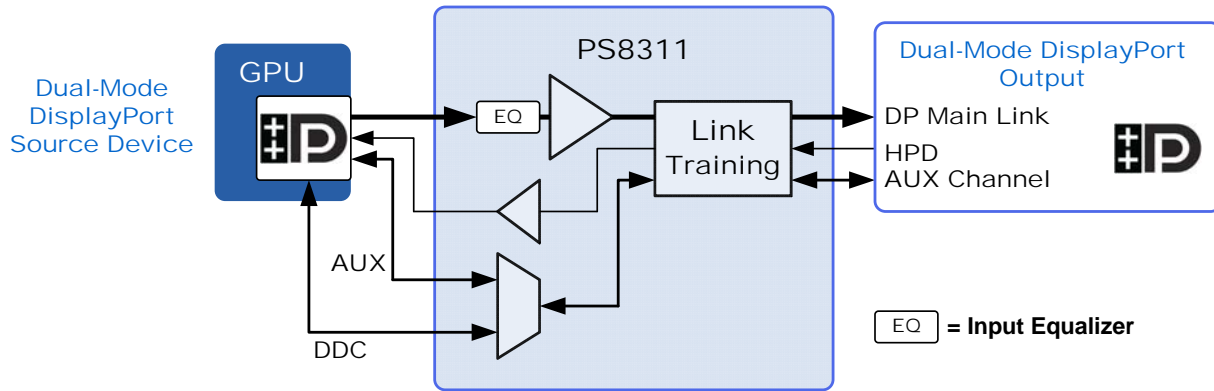


PS8311 DisplayPort™ Repeater

DisplayPort Signal Conditioner for Dual-Mode Source Outputs

Product Brief

PS8311



KEY FEATURES

- Fully compliant to the VESA DisplayPort™ 1.1a Specification
- Supports 1, 2, or 4 lane operation at 1.62 or 2.7 Gbps link rate
- Serves as a repeater or re-driver within a DisplayPort Dual-mode or Multi-mode Source device or docking station
- Removes PCB signal loss and restores signal quality at the DisplayPort output receptacle
- Transparent link training operation through field-proven AUX channel snooping, no software support needed
- Automatic input equalizer adjustment prevents input overdriving by input Source device responding to Link Training settings
- Automatic and Source-initiated power management control
- Integrated DDC / AUX channel mux supports Multi-mode or Dual-mode configurations, eliminates external circuitry
- Single 3.3 V power supply
- 7x7mm 48-pin QFN RoHS Package
- 0°C to 85°C Operating Temperature Range
- ESD: Human Body Mode at 8 kV

APPLICATIONS

- PC Desktop and Notebook Motherboards
- Notebook Docking Stations
- Graphics Cards

GENERAL DESCRIPTION

PS8311 is Parade's second-generation DisplayPort™ repeater, similar in function to the field-proven first generation PS8121ED device. Like the PS8121ED, the PS8311 is a 1-to-1 DisplayPort™ Repeater, or re-driver, designed to be used in a DisplayPort Source device. It supports DisplayPort Link Training by utilizing AUX Channel interception, or "snooping", a concept first introduced by Parade Technologies with a patent pending.

In application the PS8311 it is placed near the DisplayPort output receptacle. The device removes distortion from the internally distributed DisplayPort signal imposed by system PCB traces and internal connectors, and delivers a low distortion DisplayPort output signal.

The PS8311 includes a new automatic input equalizer function that automatically adjusts the input gain and equalization level during link training – this new feature compensates for the input level change expected when the original DisplayPort Source also adjusts its output levels in response to Link Training commands. Another new feature is an integrated multiplexer for the HDMI™/DVI DDC signal and DisplayPort AUX channel, eliminating the external circuitry previously needed for Multi-mode or Dual-mode Source devices. The PS8311 also includes new automatic power management circuitry. An I2C input is provided for optional use for other device power management and control functions.

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