NEW PRODUCT BRIEF

PI3VDP1431/PI3VDP1431A

Low Power Dual-mode DisplayPort Level Shifter with 3.4Gbps ReDriver

PI3VDP1431/PI3VDP1431A are low power dual mode DisplayPort Level Shifters with integrated 3.4Gbps ReDrivers to improve jitter performance. Input channels has pull down termination resistors (RT), optimized for DisplayPort level shifter application.

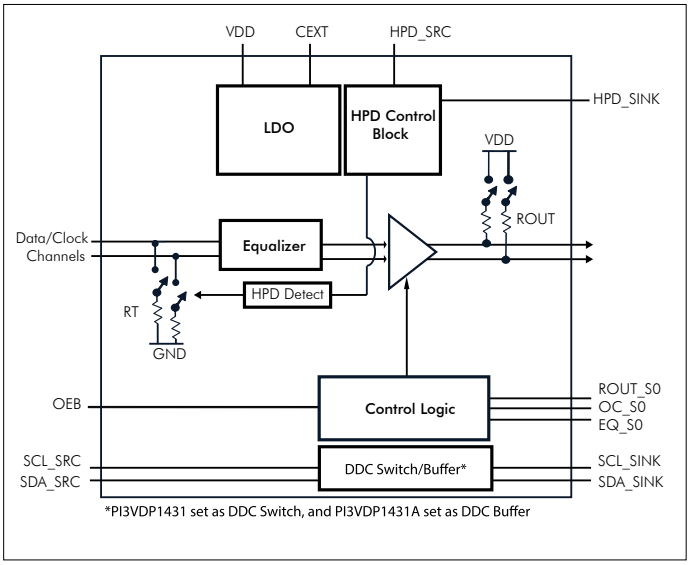
For mobile platforms, extending battery hours has been one of the most challenging features. The PI3VDP1431/ PI3VDP1431A supports output squelch and or HPD detection (Hot plug Detect) for smart power management to extend battery life with <1mA stand-by current.

The device converts the AC and DC coupled input signals to the compliant signals in the HDMI or dual mode DisplayPort source systems. Programmable TMDS input signal equalization helps to solve the compliance jitter issues, created in the non-standard HDMI source system with robust ESD/EOS protection.

Application

Notebook and Desktop computers

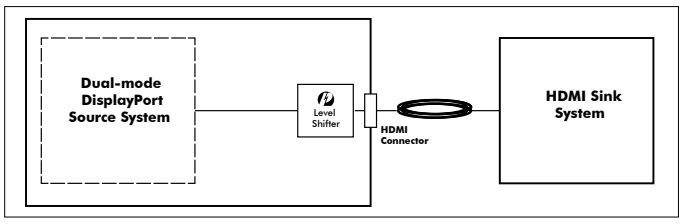
Block Diagram



Features

- Dual-mode DisplayPort level shifter/Redriver
- Operation up to 3.4 Gbps per lane (340MHz pixel clock)
- 4K Ultra HD, 3D video formats (1080p, 1080i, 720p) 48-bit per pixel Deep Color support
- Low standby current with DDC passive Switch or Buffer mode
- Flexible 3 steps equalization control steps: 2.5, 5, 7.5 dB
- Pre-emphasis control 3 steps: 0, 1.5, 2.5 dB
- Automatic output squelch and HPD function for power saving states management at no input signal condition
- Convert low-swing DC or AC coupled differential input
- Integrated DDC level shifter or DDC Buffer (A version)
- Signal Input channels with pull-down termination resistor
- 3.3V single power supply
- Pin-to-Pin compatible with PI3HDMI511/PI3HDX511A
- Integrated ESD protection on I/O pins. +4k/-8kV contact
- 32-pin TQFN(ZLS32) 3x6mm package

Application Diagram



Device Information

Part Number	Package Size	Description
PI3VDP1431	TQFN(32) 3x6mm	DDC Switch
PI3VDP1431A	TQFN(32) 3x6mm	DDC Buffer