



PS8513A & PS8513B SATA Bidirectional Repeaters

Product Brief

PS8513A, PS8513B

KEY FEATURES

- Supports serial-ATA (SATA) II/SAS up to 3.0Gbps
- Supports SATA Out-of-Band (OOB) Signaling
- **Lowest Power SATA Repeater** – only 9 mW power draw when in automatic power saving mode (PS8513A)
- Optimized output drivers for improved signal integrity
- Integrated 50Ω termination resistors for input and output
- Adjustable receiver equalization compensates for FR4 traces up to 20 inches
- Configurable output levels for SATA and eSATA use
- Programmable output pre-emphasis
- Supply voltage options:
 - PS8513A: Single 1.5V power supply
 - PS8513B: Single 3.3V power supply
- 20-pin TQFN RoHS package
- 0° to 85°C operating temperature range
- ESD: Human Body Mode to 8 kV

GENERAL DESCRIPTION

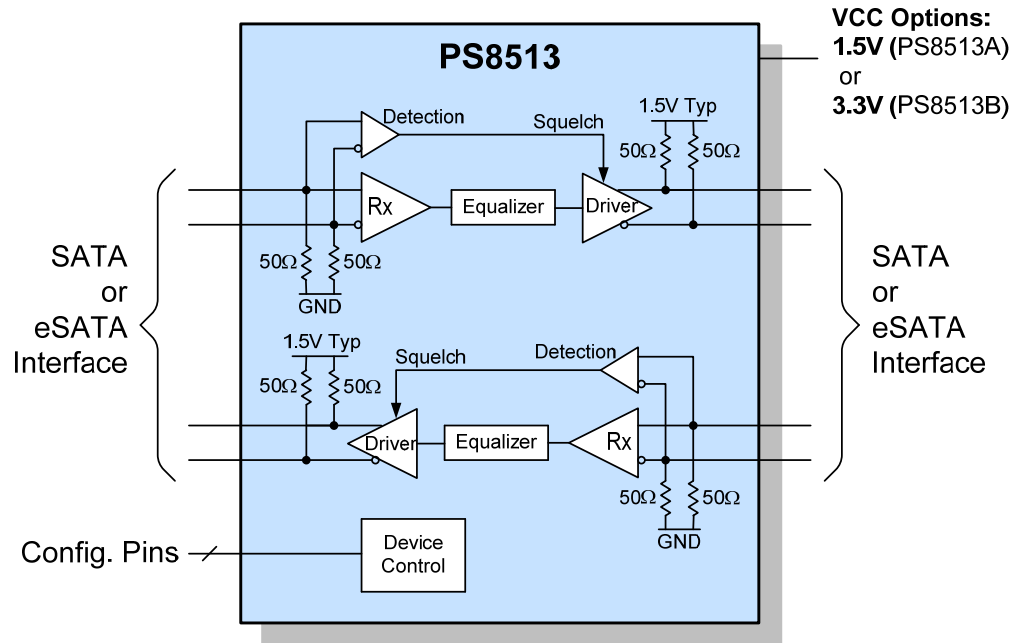
PS8513A and PS8513B are bidirectional SATA repeaters that integrate two equalizer-driver channels to recondition SATA/SAS signals. In a typical application, the PS8513A/B is placed close to an eSATA receptacle to compensate for board losses and regenerate high-quality SATA electrical signals. Device options provide for 1.5V or 3.3V power supply operation.

Both input receivers have programmable input equalization, and both output drivers have programmable output boost for eSATA connections as well as programmable pre-emphasis. A squelch circuit prevents driver output when the input amplitude drops below the threshold level.

Compared to similar devices, the PS8513A/B offer reduced power consumption. The 1.5V PS8513A device consumes only 9mW in automatic power saving mode, and <0.4mW in standby. The automatic power saving mode requires no host or firmware support. Exit from Partial and Slumber states is <50ns.

APPLICATIONS

- Desktop and laptop PCs
- Docking Stations
- Servers
- Workstations
- Data Storage Systems



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