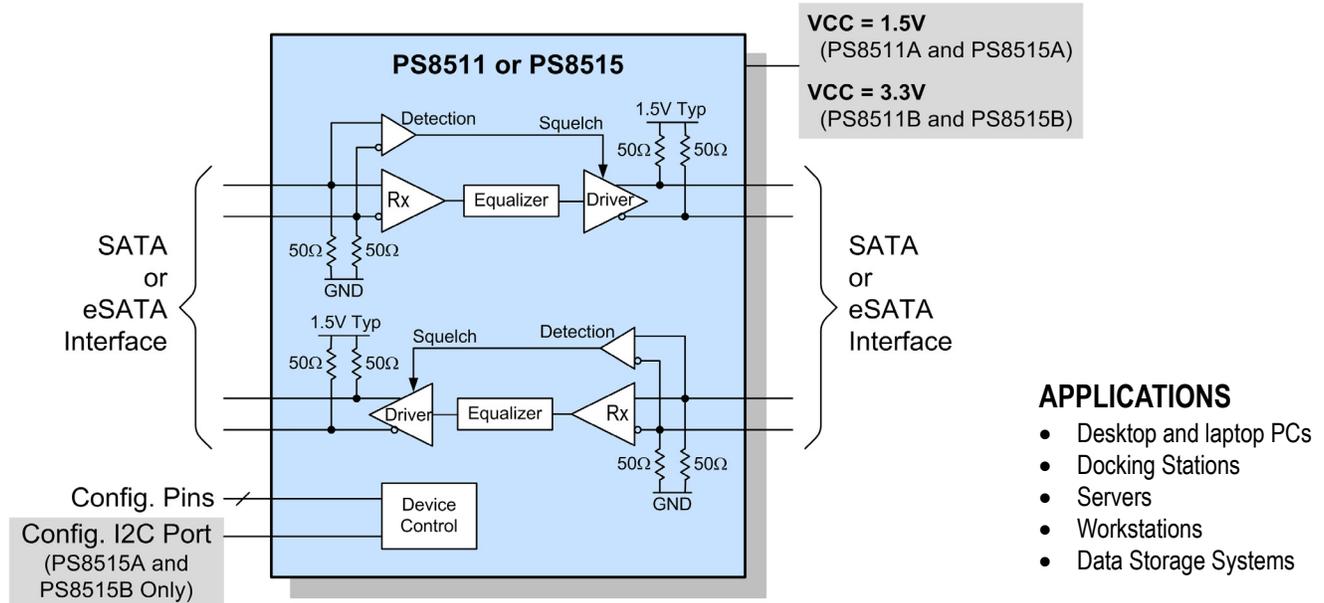




PS8511A/B & PS8515A/B SATA Bidirectional Repeaters

Product Brief

PS8511A, PS8511B, PS8515A, PS8515B



KEY FEATURES

- Supports serial-ATA I and II up to 3.0Gbps
- Supports SATA Out-of-Band (OOB) Signaling
- **Lowest Power SATA Repeater** -- Automatic power saving mode for SATA power state management; <50ns exit from Partial and Slumber states
- Integrated 50Ω termination resistors for input and output
- Adjustable receiver equalization compensates for FR4 traces up to 20 inches
- Supports SATA and boosted eSATA output levels
- Programmable output pre-emphasis
- Local I2C control option (PS8515A and PS8515B)
- Single 1.5V or 3.3V power supply (device options)
- 90mW total power in active mode (PS8511A and PS8515A)
- 20-pin TQFN RoHS package
- 0° to 85°C operating temperature range
- ESD: Human Body Mode to 8 kV

GENERAL DESCRIPTION

PS8511A/B and PS8515A/B are bidirectional SATA repeaters that integrate two equalizer-driver channels to re-condition SATA signals. In a typically application, the PS8511A/B or PS8515A/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, and also I2C control capability.

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 PS8511A/B and PS8515A/B offer greatly reduced power consumption. The 1.5V devices consume only 90mW when fully active, 20mW in automatic power saving mode, and <1mW in standby. The automatic power saving mode requires no host or firmware support. Exit from Partial and Slumber states is <50ns.

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