

Product Brief WM8960

Stereo CODEC with 1W Stereo Class D Speaker Driver

DESCRIPTION

The WM8960 is a low power, high quality stereo codec designed for portable digital audio applications.

Stereo class D speaker drivers provide 1W per channel into 8Ω loads. Guaranteed low leakage, excellent PSRR and pop/click suppression mechanisms enable direct battery connection for the speaker supply.

The device also integrates a complete microphone interface and a stereo headphone driver. External component requirements are drastically reduced as no separate microphone, speaker or headphone amplifiers are required. Advanced on-chip digital signal processing performs automatic level control for the microphone or line input.

Stereo 24-bit sigma-delta ADCs and DACs are used with low power over-sampling digital interpolation and decimation filters and a flexible digital audio interface.

The master clock can be input directly or generated internally by an onboard PLL, supporting most commonly-used clocking schemes.

The WM8960 operates at analogue supply voltages down to 2.7V. The digital core can operate at voltages down to 1.71V to save power. The speaker supply can operate at up to 5.5V, providing 1W per channel into 8Ω loads. The maximum for all other supplies is 3.6V. Different sections of the chip can also be powered down under software control.

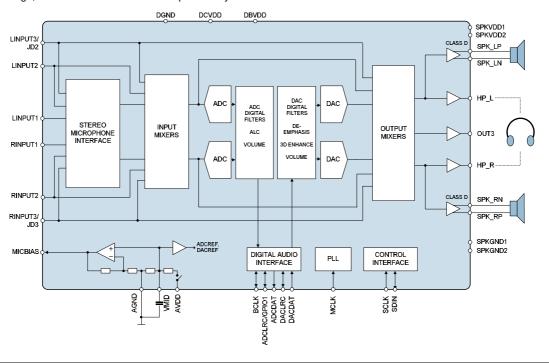
The WM8960 is supplied in a very small and thin 5x5mm 32-pin QFN package, ideal for use in hand-held and portable systems.

FEATURES

- DAC SNR 98dB ('A' weighted), THD -84dB at 48kHz, 3.3V
- ADC SNR 95dB ('A' weighted), THD -82dB at 48kHz, 3.3V
- Pop and click suppression
- Microphone Interface
- Programmable ALC / Limiter & Noise Gate
- 3D Stereo Enhancement
- Stereo Class D Speaker Driver
 - 1W per channel into 8Ω BTL speakers
 - Flexible switching clock
 - Filterless connection supported
- On-chip Headphone Driver
 - 40mW output power into 16Ω at 3.3V
 - Capless mode
- Low Power Consumption
 - 10mW headphone playback (2.7V / 1.8V supplies)
 - 20mW record and playback (2.7V / 1.8V supplies)
- Low Supply Voltages
 - Analogue 2.7V to 3.6V (AVDD)
 - Speaker 2.7V to 5.5V (SPKVDD)
 - Digital core: 1.71V to 3.6V (DCVDD)
 - Digital I/O: 1.71V to 3.6V (DBVDD)
- On-chip PLL provides flexible clocking scheme
- Sample rates: 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48
- 5x5x0.9mm 32-pin QFN package

APPLICATIONS

- · Games consoles
- Portable media / DVD players
- Mobile multimedia



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ADDRESS:

Wolfson Microelectronics plc 26 Westfield Road Edinburgh EH11 2QB

United Kingdom

Tel :: +44 (0)131 272 7000 Fax :: +44 (0)131 272 7001

Email :: sales@wolfsonmicro.com

