





**CX20709 Features**  
**CODEC**

- 4-wire and 5-wire digital audio I/O (I<sup>2</sup>S/PCM/SPDIF), supporting full duplex independent sampling rates
- One 3-wire I<sup>2</sup>C or 4-wire SPI slave interface for external MCU
- Eight GPIO pins
- 2.5 W x 2 BTL stereo Class-D speaker amplifier, also configurable as a PWM output for external feedback-less type Class-D amplifier
- USB 2.0 Compliant Audio Class Interface (high speed data and control)
- Output for external feedback-less type Class-D amplifier
- Spread Spectrum for filter-less, low EMI output
- Three single-ended stereo or one differential stereo analog audio input converted to digital format
- Two microphones interfaces with on-chip bias supply
- Integrated 50 mW headphone driver with jack sense
- Differential line out
- Separately mixed mono line-output
- Three 24-bit DAC/four ADC, SNR 102 dB, THD - 92 dB at 48 kHz 3.3 V
- Audio sample rate: 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48, 64, 88.2, 96 kHz

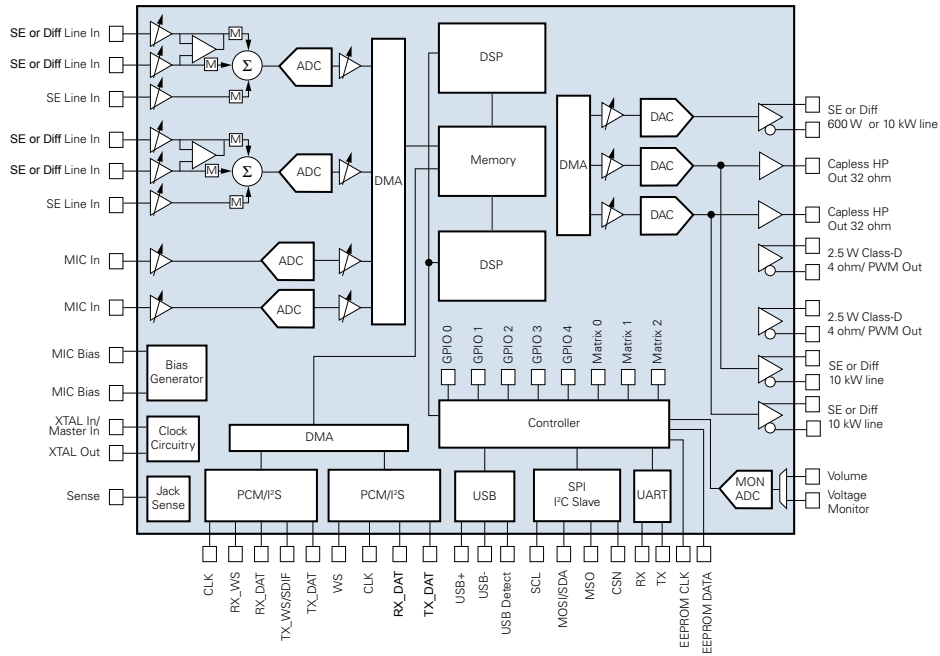
- 90 dB dynamic range with 0.01percent THD+N at 4 Ω load
- 10-bit ADC multiplexed to support analog volume potentiometer and DC level detection
- Flexible power management
- Variable master clock rates

**DSP**

- Subband acoustic echo suppression and cancellation
- Stereo beam-forming
- Noise reduction
- Dynamic loudness adaptor
- Mic auto gain control
- Subband line echo cancellation (two-way intercom applications)
- Digital parametric equalizer (10 bands/channel)
- Dynamic range compression
- 4th Order Digital Crossover for Subwoofer Line-out
- 3D Expander (Phantom mode and Immersion mode)

**SPoC Configuration Toolbox**

- Fast configuration tool via USB-to-I<sup>2</sup>C from PC
- Device configuration and DSP parameter adjustment
- Output log for convenient MCU programming



**CX20709 Interface Diagram**  
The CX20709 is offered in a 76-pin QFN package

**Conexant Product Portfolio**

Conexant's comprehensive product portfolio includes solutions for imaging, audio, embedded modem and video surveillance applications.

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