

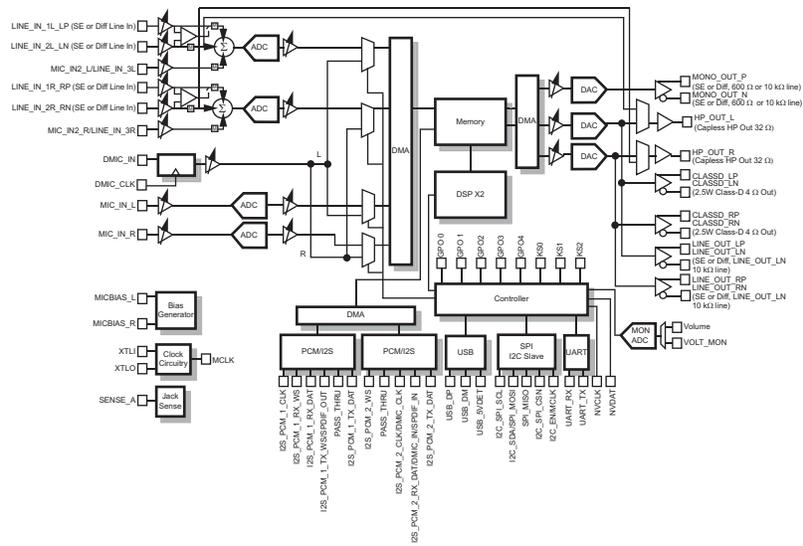


CODEC Features

- ◆ 4-wire and 5-wire digital audio I/O (I²S/PCM/SPDIF), supporting full duplex independent sampling rates, master clock for optional PCM/I²S slave codec (SPDIF-in available in CX20709-21Z)
- ◆ One 2-wire I²C and one 4-wire SPI slave interface for external MCU
- ◆ USB 2.0 Compliant full speed UAC Interface
- ◆ Supporting dual USB playback end points (available in CX20709-21Z)
- ◆ Stereo Digital Microphone, up to 12 MHz clock rate (available in CX20709-21Z)
- ◆ Eight GPIO pins
- ◆ 2.8 W x 2 BTL filter-less stereo Class-D Speaker Amplifier
 - Low EMI Class-D amplifier output with Spread Spectrum and common mode scrambler
- ◆ Integrated 50 mW headphone driver with jack sense
- ◆ Single-ended or differential line output

- ◆ Separate mixed mono line-output for sub-woofer or intercom usage
- ◆ Three single-ended stereo or one differential stereo analog audio input
- ◆ Up to 4 microphone interfaces with on-chip bias supply (available in CX20709-21Z)
- ◆ 24-bit DAC/ADC, SNR 102 dB, THD -92 dB at 48 kHz 3.3 V
 - In DSP mode, the processing will be limited the input and output to 16-bit effective resolution
- ◆ Audio sample rate: 8, 16, 22.05, 24, 32, 44.1, 48, 88.2, 96 kHz
- ◆ 90 dB Dynamic Range with 0.1% THD+N at 4 Ω load
- ◆ 12-bit ADC multiplexed to support analog volume potentiometer and DC level detection
- ◆ Flexible Power Management
- ◆ Variable master clock rates
- ◆ Configurable On-Chip proprietary Voice/Audio Processing
 - Subband Acoustic Echo Cancellation

- Dual Microphone Beam Forming
- Noise Reduction
- Dynamic Loudness Adaptor
- Microphone Automatic Gain Control
- Subband Line Echo Cancellation (2-way intercom applications)
- Digital Equalizer (10 bands/channel)
- Dynamic Range Compression
- 4th Order Digital Crossover for Subwoofer Line-out
- Conexant sound-bar algorithm for USB 5.1 channel sound-bar enhancement (available in CX20709-21Z)
- ◆ SPoC Configuration Toolbox
 - Fast configuration via USB-to-I²C from PC
 - Data path, I/O setup, and DSP parameter adjustment
 - Output log for convenient MCU programming



Functional Block Diagram

Conexant Product Portfolio

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

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