



CX20745 Features CODEC

- Stereo 8/16/24-bit DAC supports sample rates capable of 8, 8.018, 11.025, 12, 16, 16.0364, 22.05, 24, 32, 44.1, 48, 88.2, and 96 kHz, depending on the master clock
 - 98 dB Dynamic Range
 - -85 dB THD
- Stereo 8/16/24-bit ADC supports sample rates capable of 8, 8.018, 11.025, 12, 16, 16.0364, 22.05, 24, 32, 44.1, 48, 88.2, and 96 kHz, depending on the master clock
- Supports master clock of 24.576 MHz and 22.5792 MHz
- Data interface: I²S that can be converted to PCM, I²S/PCM are slave only
- Control Interface: I²C slave only
- Audio ports:
 - Stereo analog input port supporting up to one single-ended stereo microphone, one differential mono microphone, one single-ended stereo line-in, or one differential mono line-in

- 4-conductor OMTP headset set jack compliant with integrated in-line command sensing. Mic bias sensing capability for external headset control. Supports sense and switching between MIC and GND pins
- Stereo class-D amplifier
- Stereo capless headphone port
- Single-ended analog line output (stereo)
- Digital microphone input (stereo)
- Class-D amplifier with the following modes of operation:
 - Up to 2 W per channel into 4Ω with 5 V supply
 - Up to 1 W per channel into 4Ω with 3.3 V supply
 - Spread Spectrum for EMI protection on the class-D amplifier
- Line-In loopback mode, where the input signal will loop back to the DAC for playback with EQ
- PopShield active anti-pop circuit
- Device can operate in 3.3 V only mode
- Integrated LDO converting 5 V to 3.3 V, and

3.3 V to 1.8 V

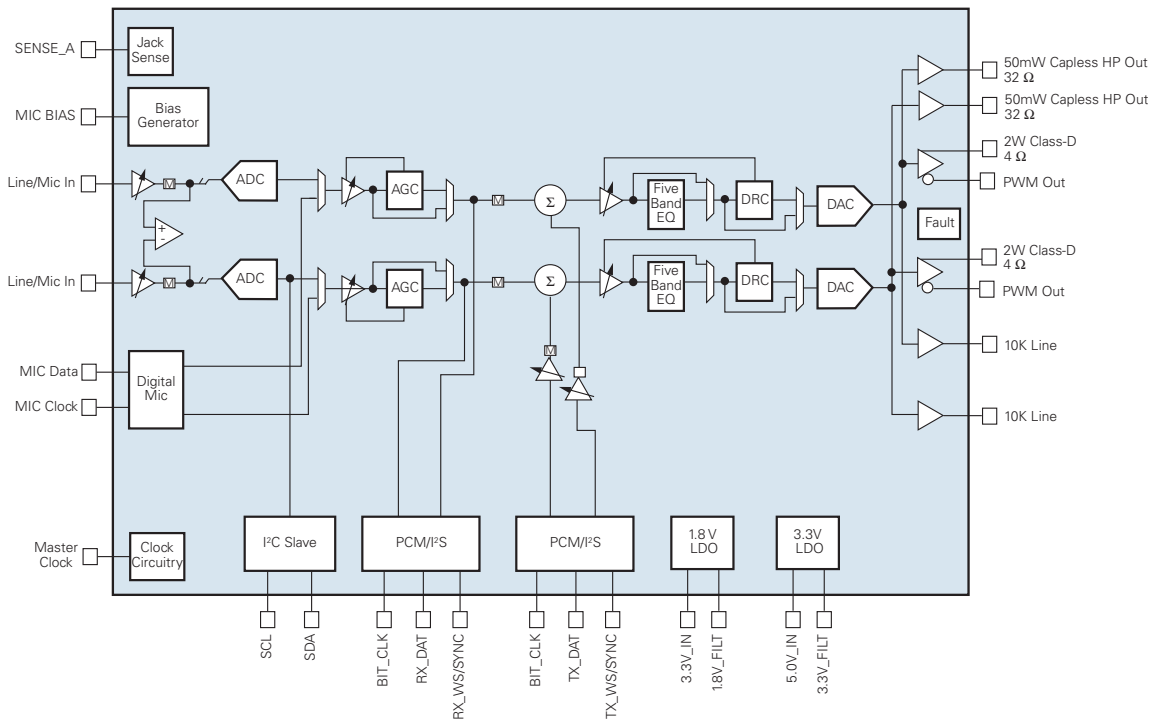
- PDM digital MIC interface supporting clock frequency of 3.072 MHz and 1.536 MHz
- Supports industrial temperatures of -40~85C
- Jack sense supporting up to four jacks
- Codec provides independent gain and mute control for both DAC and ADC
- Four General purpose GPIOs
 - GPIO1 and GPIO2 can be configured for “Infinity Volume Control” using a rotary encoder

DSP

- Digital parametric equalizer (5 bands/channel)
- Dynamic range control including compressor and limiter
- Microphone automatic gain control

Power Management

- Idle Mode: 2.2 mA with 10 ms fast resume
- Sleep Mode: 0.5 mA (digital supply only) with 200 ms resume



CX20745 System Block Diagram
The CX20745 is offered in a 48-pin QFN package

Conexant Product Portfolio

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

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