- **Two 16-Bit A/D Converters**
- **Two 16-Bit D/A Converters**
- **Programmable Input/Output Gain**
- **Analog Crosspoint to Connect the Two Codecs to Any of the I/O Ports, Controlled Through the Serial Port or the I^2C Bus**
- **8-Bit A-Law/μ-Law Companded Data or 16-Bit Linear Data Complying With G.711 Standard**
- **Programmable A/D and D/A Conversion Rate**
- **Typical 77 dB Signal-to-Noise + Distortion for ADC**
- **Typical 78 dB Signal-to-Noise + Distortion for the DAC**
- **Typical 80 dB Dynamic Range**
- **All Typical Sampling Rates Such as 7.2, 8, 8.229, 9.6, 10.285, 12, 14.4, and 16 kHz Supported**
- **Preamplifiers for Microphone, Handset, Headset and Speaker Phone, Gain Selectable Via the Serial Port or I^2C Bus**
- **2.5-V Microphone Bias Voltage**
- **Seamless Interface to a Single McBSP Port of a C54x or a C6x DSP**
- **Four TLV320AIC22 ICs Can be Cascaded Together to Allow up to 8 Channels**
- **2s-Complement Data Format**
- **Differential Outputs**
- **Low Crosstalk < –85 dB**
- **Hardware/Software Power Down**
- **Independent Power Down for Drivers**
- **Single 3.3-V Supply Operation**
- **204 mW Typical Power Consumption**
- **Packaged in 48-Pin LQFP Package**

PRODUCT PREVIEW

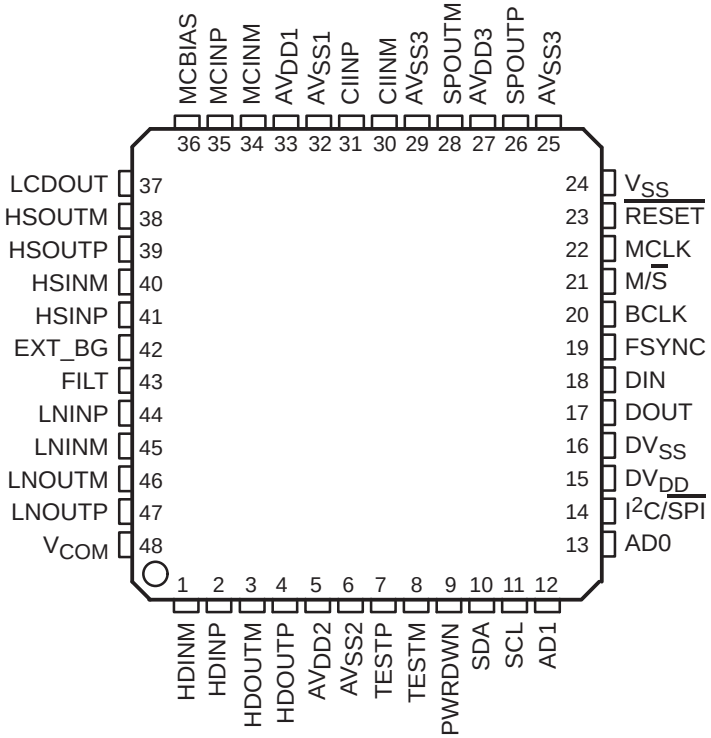
description

The TLV320AIC22 is a dual codec for voice applications including voice over internet protocol (VOIP). It features two A/D conversion channels and two D/A conversion channels that can be connected to a handset, headset, speaker, microphone or a subscriber line via an analog crosspoint.

The TLV320AIC22 has a flexible serial port that allows the two channels of the TLV320AIC22 to be interfaced to a single multi-channel buffered serial port (McBSP) of the DSP. The two channels share the digital interface at different time slots. Up to four TLV320AIC22 units can be cascaded together to allow eight channels. For control purposes, either the serial interface or an I^2C interface can be used. Programmable gain amplifiers, preamplifier gain, microphone bias voltages, analog crosspoint are programmed through the serial port or the I^2C interface. The TLV320AIC22 can be powered down via a dedicated pin or by using software control, to reduce heat dissipation.

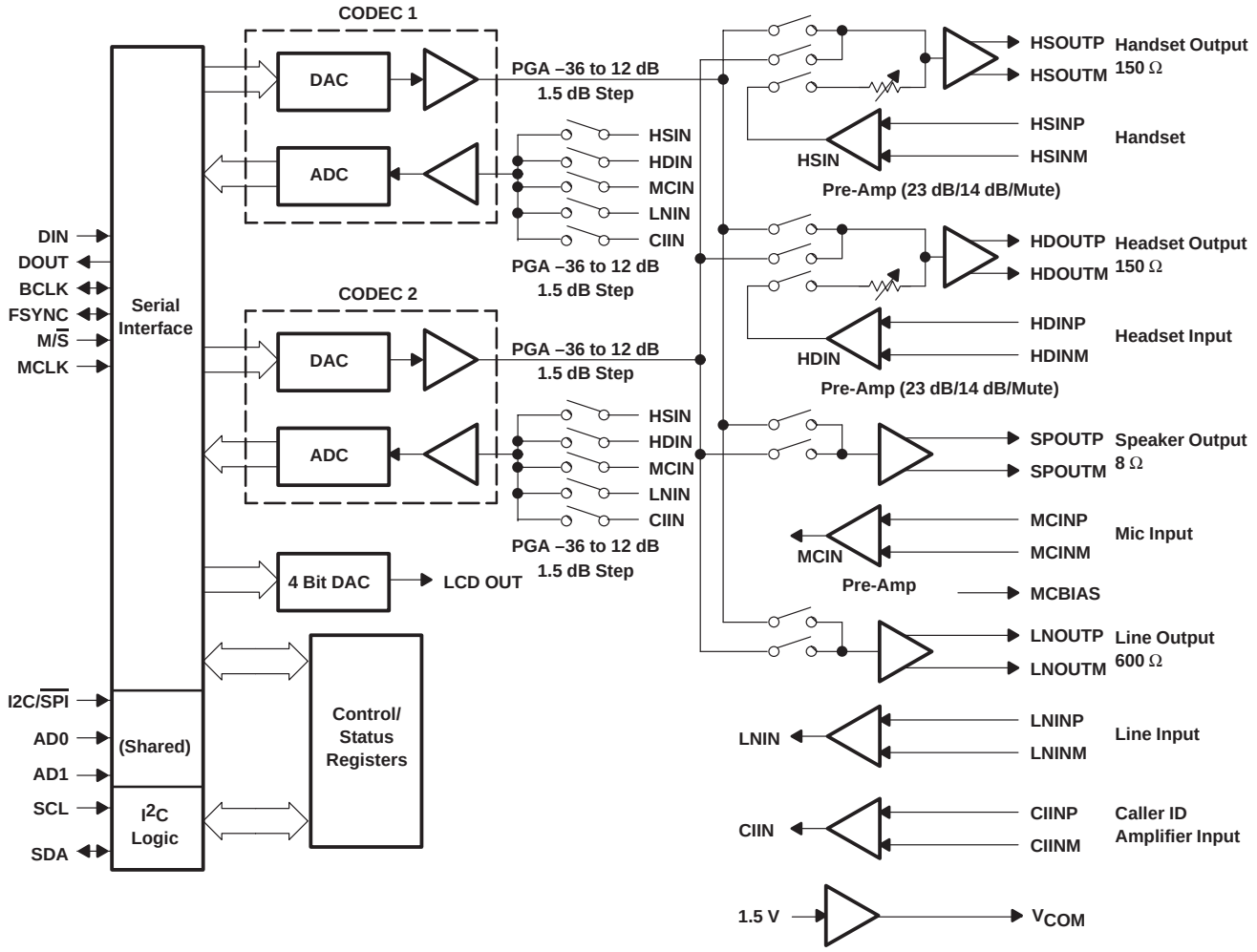
The TLV320AIC22 is available in a 48-pin LQFP package and is characterized for operation from –40°C to 85°C.

LQFP PACKAGE
(TOP VIEW)



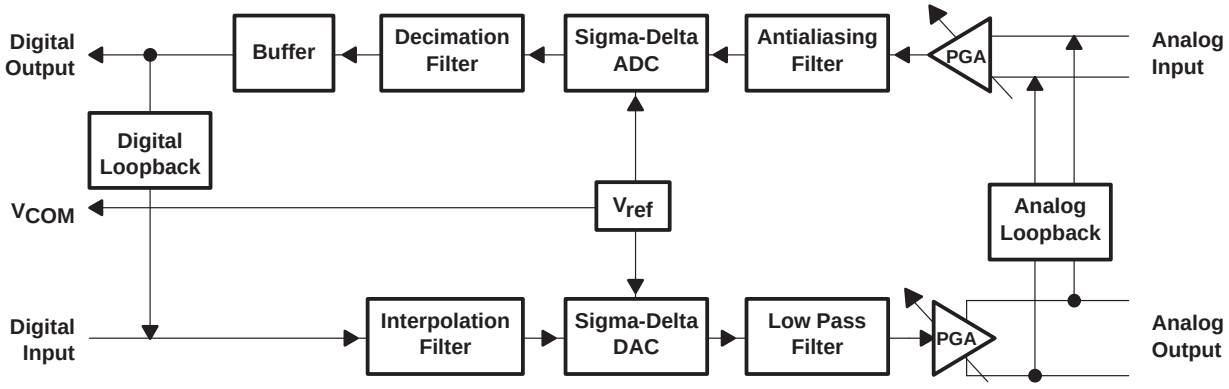
PRODUCT PREVIEW

functional block diagram



NOTE: Input and output analog signals are differential
All switches are register controlled

functional block diagram (one of two codecs shown)



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