

Integrating Mixed-Signal Solutions

PRODUCT BRIEF

STAC9700

Value PC AC'97 Stereo Codec

OVERVIEW

A low Cost, Stereo codec. As a primary codec, can provide 4-channel stereo support when paired with STAC9721 or STAC9744 or 6-channel stereo support with AC-3 playback for DVD applications when paired with STAC9708.

FEATURES

- High performance $\Sigma\Delta$ technology
- Energy saving power down modes
- 18-bit full duplex stereo ADC, DACs
- AC-Link protocol compliance
- Supports mixer bypass mode
- Pin compatible with the STAC9704/21/44
- SigmaTel Surround (SS3D) Stereo Enhancement
- Five analog line-level inputs
- 48-pin TQFP
- SNR > 90 dB through Mixer and DAC
- +3.3V and +5V operation

KEY SPECIFICATIONS

- Mixer Bypass Mode
- Analog LINE_OUT SNR: 98 dB
- Digital DAC SNR: 96 dB
- Digital ADC SNR: 87 dB
- Total Harmonic Distortion: 0.02%
- Crosstalk between Input Channels: -70 dB
- Spurious Tone Rejection: 100 dB

DESCRIPTION

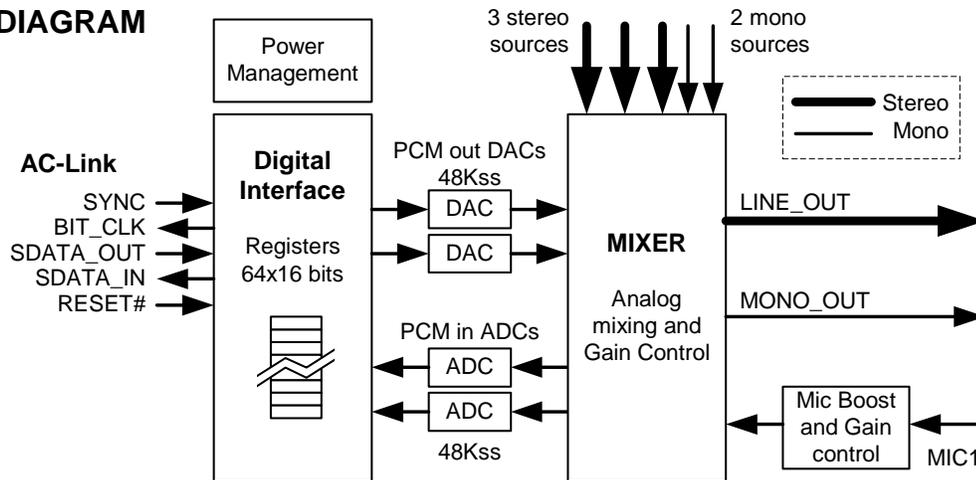
SigmaTel's STAC9700 is a general-purpose 18-bit stereo, full duplex, audio codec that is built around the analog component specification of AC'97 (Audio Codec '97 Component Specification rev. 1.03). The STAC9700 incorporates SigmaTel's proprietary Sigma-Delta technology to achieve a DAC SNR in excess of 90dB and line through SNR of greater than 95 dB. The DACs, ADCs, and mixer are integrated with analog I/Os, which include three analog line-level stereo inputs, two analog line-level mono inputs, one stereo output, and one mono output channel. Also included is SigmaTel's 3D stereo enhancement (SS3D) for increased speaker separation when using typical low-cost PC speakers. The STAC9700 is a primary codec, and can be used with the STAC9721/23/44/45 or a 4-channel STAC9708 as the secondary, in multiple codec configurations. This configuration can provide up to six-channel output, delivering AC-3 playback for DVD applications. The STAC9700 communicates via the five-wire AC-Link interface with any AC-Link capable controller or advanced core logic chip-set. Packaged in an AC'97 compliant 48-pin TQFP, the STAC9700 can be placed on motherboards, daughter boards, CNR, ACR or AMR, and docking stations.

ORDERING INFORMATION

Part Number	Package	Temp Range	Supply Range
STAC9700T	48-pin TQFP 7mm x 7mm x 1.4mm	0 °C to +70 °C	DVdd = 3.3V to 5.0V, AVdd = 5.0V



**STAC9700
BLOCK DIAGRAM**



ADDITIONAL SUPPORT

Additional product and company information can be obtained by going to the SigmaTel website at: www.sigmatel.com

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