TLV320AIC3100IRHBR

PCM Audio Codec 1ADC / 2DAC Ch 32-Pin VQFN EP T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	QFN32
Product Type:	Communication & Networking ICs
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active

TLV320AIC3100IRHBR Image

Images are for reference only

Inquiry

General Description

The TLV320AIC3100 is a low-power, highly integrated, high-performance codec which provides a stereo audio DAC, a mono audio ADC, and a mono class-D 4-Ω speaker driver.

The TLV320AIC3100 features a high-performance audio codec with 24-bit stereo playback and monaural record functionality. The device integrates several analog features, such as a microphone interface, headphone drivers, and speaker drivers. The TLV320AIC3100 has built-in digital audio processing blocks (PRB) for both the DAC and ADC paths. The digital audio data format is programmable to work with popular audio standard protocols (I2S, left/right-justified) in master, slave, DSP, and TDM modes. Bass boost, treble, or EQ can be supported by the programmable digital signal-processing block. An on-chip PLL provides the high-speed clock needed by the digital signal-processing block. The volume level can be controlled by either pin control or by register control. The audio functions are controlled using the I2C serial bus.

The TLV320AIC3100 has a programmable digital sine-wave generator and is available in a 32-pin QFN package.

Key Features

Stereo Audio DAC With 95-dB SNR

Mono Audio ADC With 91-dB SNR

Supports 8-kHz to 192-kHz Separate DAC and ADC Sample Rates

Mono Class-D BTL Speaker Driver (2.5 W Into 4 Ω or 1.6 W Into 8 Ω)

One Differential and Three Single-Ended Inputs With Mixing and Level Control

Microphone With Bias, Preamp PGA, and AGC

Built-In Digital Audio Processing Blocks (PRB) With User-Programmable Biquad and FIR Filters

Digital Mixing Capability

Programmable Digital Audio Processor for Bass Boost/Treble/EQ With up to Five Biquads for Record and up to Six Biquads for Playback

Pin Control or Register Control for Digital-Playback Volume-Control Settings

Digital Sine-Wave Generator for Beep

Integrated PLL Used for Programmable Digital Audio Processor

I2S, Left-Justified, Right-Justified, DSP, and TDM Audio Interfaces

I2C Control With Register Auto-Increment

Full Power-Down Control

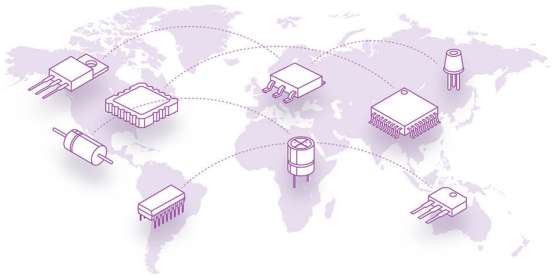
Power Supplies:
Analog: 2.7 V–3.6 V

Digital Core: 1.65 V–1.95 V

Digital I/O: 1.1 V–3.6 V

Class-D: 2.7 V–5.5 V (SPKVDD ≥ AVDD)

5-mm × 5-mm 32-QFN Package



AVAQ

Recommended For You

TLV320AIC23BIPWR

Texas Instruments, Inc

TSSOP28

TLV320AIC3104IRHBR

Texas Instruments, Inc

QFN32

TL16C554AIPN

Texas Instruments, Inc

LQFP80

TLV320AIC3101IRHBR

Texas Instruments, Inc

QFN32

TL16C554APN

Texas Instruments, Inc

LQFP80

TLV320AIC24KIPFBR

Texas Instruments, Inc

TQFP-48

TL16C554PN

Texas Instruments, Inc

QFP

TLV320AIC24KIPFB

Texas Instruments, Inc

TQFP-48

TL16C752BLPTREP

Texas Instruments, Inc

LQFP-48

TL16C550DIPFBR

Texas Instruments, Inc

48-TQFP

TLC320AC01CFN

Texas Instruments, Inc

PLCC28

TL16C552AFN

Texas Instruments, Inc

PLCC

TL16C450FN

Texas Instruments, Inc

PLCC44

TL16C554FN

Texas Instruments, Inc

PLCC

TLV320AIC31IRHBR

Texas Instruments, Inc

VQFN32