



VT1613



As high quality audio becomes more a necessary feature on PCs, the VIA Vinyl VT1613 AC'97 Audio Codec is a complete audio codec stereo solution that combines high-performance, a wide range of connection options, and easy integration into a wide array of applications.

Benefits of VIA Vinyl VT1613

High audio performance: With support for the AC'97 2.3 specification the VIA VT1613 has 20-bit full duplex performance, and a variable sampling rate with 1Hz resolution. Supports up to 96kHz sampling rates for analog and digital I/Os.

Feature loaded: The VIA VT1613 includes 3D stereo expansion for simulated surround sound, a headphone amplifier with thermal protection, and hardware VU peak meters for PCM data streams.

Wide array of connections: The VIA VT1613 provides stereo outputs, four stereo and 2 mono analog line-level inputs along with an integrated IEC958 line driver for S/PDIF or LPCM connections to the latest audio devices.

Low Power: Low power design with Dynamic Power Management ideal for power conscience devices.

Description

The VIA VT1613 Audio Codec conforms to the AC'97 2.3 specification providing 20-bit resolution performance. With 2 channel outputs the VIA VT1613 provides high-performance stereo quality for headphones or speaker connections. Furthermore, an integrated headphone amplifier with thermal shutdown reduces the need for further external components. The VIA VT1613 includes analog mixer circuitry for stereo enhancement to provide a pleasing 3D surround sound effect for stereo media. For a completely digital audio path the VIA VT1613 includes an integrated IEC958 line driver for S/PDIF compressed digital or LPCM audio out.

Four stereo and 2 mono audio inputs provided by the VIA VT1613 enable connections to a wide range of audio inputs such as microphones, line inputs, and phone connections. Sample rate converters in the VIA VT1613 can be adjusted in 1Hz increments providing maximum recording manipulation capabilities, and hardware VU peak meters are provided for PCM streams.

For maximum ease of integration the VIA VT1613 is designed with aggressive power management to achieve low power consumption. When used with a 3.3v analog power supply, the power consumption can be further reduced. The VIA VT1613 is available in a small footprint 48-pin LQFP package. Typical applications of the VIA VT1613 include integration

Key Features

Sound Quality

- » 20-bit independent rate stereo ADC/DAC
- » 20-bit stereo full duplex
- » 1 Hz resolution VSR (Variable Sampling Rate) on all channels

Input/Output

- » Integrated IEC958 line driver for S/PDIF
- » S/PDIF compressed digital or LPCM audio out
- » Hardware VU peak meters for PCM streams
- » 2 stereo, 2 mono analog line-level inputs
- » Alt. Line-level output with volume control

Architecture

- » AC'97 2.3 S/PDIF extension compliant codec

Other Features

- » 3D stereo expansion for simulated surround
- » Headphone Amplifier with Thermal Protection
- » Exceeds Microsoft® WHQL logo requirements

Package

- » 48-pin LQFP small footprint package

Power

- » Low Power consumption mode
- » 3.3V digital, 3.3 or 5V analog power supply

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