



Small is
Beautiful



via vinyl audio



VIA Vinyl VT1618 AC'97 Audio Codec



As consumers increasingly use their PCs as multimedia tools, immersing them in a world of home entertainment options that please the ear and challenge the imagination, audio has become a primary feature in the modern PC. Increased use of the PC for audio playback, recording, and data transfers mean the expected performance and connection interfaces are continually expanding. Continuing VIA's leadership in providing high quality Audio solutions, the VIA Vinyl VT1618 is another step in the audio revolution with a leading combination of high audio fidelity and a premium feature set.

Key Features

- » 8-channel audio outputs
- » 20-bit/96kHz analog support for leading audio fidelity
- » 16-bit/96kHz digital I/Os
- » Integrated high quality Headphone Amplifier
- » Sixth-Sense™ Jack Detection

Benefits of VIA Vinyl VT1618



High audio performance

The VIA VT1618 has a 20-bit architecture and a variable sampling rate with 1Hz resolution. Supports up to 20-bit/96kHz analog I/Os, and 16-bit/96kHz digital I/Os.

Feature rich design

Hardware downmix option allows 8-channel performance in 2 channel outputs, and a stereo enhancement feature provides a 3D sound experience.

Wide array of connections

The VIA Six-TRAC provides 8-channel outputs fully supporting surround sound applications, along with 5 stereo and 2 mono inputs.

Easy to integrate

A small footprint 48-pin LQFP package with low power consumption that exceeds Microsoft® WHQL logo requirements.

Description

The VIA Vinyl VT1618 Audio Codec is a high-end audio codec that features up to 20-bit resolutions, 96kHz sampling rates, 8-channel outputs, and also complies with AC'97 revision 2.3. The VIA Vinyl VT1618 supports DualMax™ hardware down-mixing allowing end users to enjoy 6-channel audio with 2-channel or 4-channel speakers. To maximize recording quality for home studio applications the VIA VT1618 integrates 20-bit, Sigma-Delta ADCs for stereo recording and white noise removal. The analog mixer circuitry integrates a stereo enhancement to provide a pleasing 3D surround sound effect for stereo media. A high-quality headphone amplifier is integrated into the VIA VT1618, reducing BOM cost and design time.

To make set-up as easy as possible, the VIA VT1618 provides innovative Sixth-Sense™ jack detection enabling maximum flexibility in configuring customized audio set-ups. For the user this will mean a simple process of connecting an audio device (recording or playback) to any jack, and then the VIA VT1618 will automatically detect the device. The user can then configure the correct I/O to the jack in use. This maximizes ease of use for the user, and reduces help requests. The VIA VT1618 also integrates Silent Slide-Bar which eliminates distortion when adjusting volume, and Clean-ON technology which eliminates annoying "pops" when the PC is powered on/off.

To fill out the solution VIA offers a stylish easy to use driver with the VIA VT1618 that enables full access to all of its wide range of features. The driver also includes full 3D Immerzio gaming support through Sensaura technology, to enable a new level of gaming support in an AC'97 solution.

Target markets for the VIA VT1618 include Audio on Motherboard solutions in combination with chipset South Bridges or in combination with VIA's Envy24PT audio controller. The VIA VT1618 also has broad appeal in the soundcard market, especially when combined with VIA's leading line of Envy24 audio controllers.

Key Features

Leading Audio Quality

- » Supports sampling rates up to 96kHz
- » Independent 20-bit ADC and 20-bit DAC
- » SNR (Signal to Noise Ratio) exceeds 95dB
- » Built-in 1Hz resolution VSR converter

Input/Output

- » Supports 7.1ch outputs
- » Hardware down-mixes 6-channel to 2-channel or 4-channel
- » Center and LFE channel swapping
- » Alternative Line-Level outputs at surround outputs
- » 96kHz S/PDIF output
- » Direct CD input to S/PDIF output

Architecture

- » Flexible Jack-detect design
- » Built-in accurate PLL for saving an external crystal
- » Fully compliant with AC'97 Revision 2.3

Easy System Integration

- » 4-bit 3D depth control
- » Supports EAPD control
- » Supports GPIO pins control
- » Selectable clock sources

Other Features

- » Integrates headphone amplifier with mute
- » Stereo recording
- » Dual microphones supporting Karaoke with mixing

Package

- » 48-Pin LQFP Package

Power

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