Small is Beautiful

VIA Vinyl Envy24HT PCI Audio Controller

With the evolution of the Multimedia PC, audio has become one of the essential features of the personal computer. Whether gaming, playing DVDs, or recording your favorite song, audio interfaces provide the inputs and outputs for the complete sound experience. Meeting even the most discerning user's audio requirements, the VIA Vinyl Envy24HT is a complete 24-bit sound solution for the audio enthusiast.

Key Features

» 24-bit/192kHZ audio quality
» 8 outputs, 4 inputs
» Perfect for hi-end audio playback and recording

Benefits of VIA Vinyl Envy24HT

Extremely high-performance
With 24 bit performance and 192kHz sampling rates the VIA Envy24HT provides the highest audio playback and recording quality available to the PC audio enthusiast.

Wide range of connection options
8 outbound streams and 4 simultaneous input streams allow for a wide connection range that can fully support 5.1, 6.1, or even 7.1 channel surround sound audio. A direct access general purpose connector allows for easy use of expanded connection boards.

Multiple applications
Applications for the VIA Envy24 include high fidelity home theatre entertainment, cost effective multi-track audio, while its extremely high performance enables more technical applications such as PC-based data acquisition.

Easy to integrate
Supporting I^2S and AC-link inputs and outputs or alternatively AC-link support the VIA Envy24HT can be easily combined with a wide range of codec or ADC/DAC solutions.

Description

The VIA Vinyl Envy24HT is a versatile 24-bit multi-channel audio controller that enables studio level audio performance. With support for 8 outbound streams the VIA Envy24HT can easily support the latest theatre quality 5.1, 6.1 or even 7.1 surround sound systems. For enhanced playback the VIA Envy24HT enables hardware downmixing that allows customers to experience the complete surround sound experience whether using four, or even two speakers.

Supporting up to 192kHz sampling rates the VIA Envy24HT has the highest audio recording quality in its class giving home studio musicians four simultaneous inbound streams with all paths passing as 24-bit audio, "as is", unaltered, bit per bit accurate. The VIA Envy24HT also brings full support for Windows® WDM drivers.

To maintain a full digital path for PCM or compressed audio formats, the Envy24HT integrates a complete S/PDIF transmitter for connection to digital audio interfaces. For connection to keyboards and sound devices an independent MIDI UART is provided. The VIA EnvyHT also includes a direct access 23-pin GPIO that brings flexibility for multi-purpose connections uses such as the integration of break-out boxes that allow for enhanced connection options.

Designed for easy integration by system designers, all the 5 output and 2 inputs pairs of the VIA Envy24HT can be combined with professional grade I^2S converters, S/PDIF receivers, or multi-channel out AC-link codecs, such as the VIA Eight-TRAC Audio Codec. Applications of the VIA Envy 24HT can include high fidelity multi-channel audio, home theatre and entertainment, cost effective multi-track audio, PC-based data acquisition, and waveform generation.

Key Features

Sound Quality
» 24-bit resolution audio format support
» Sampling rates up to 192kHz
» Bit accurate transfers

Input/Output
» 5 synchronous I^2S/AC-link output data stream pairs
» 2 synchronous I^2S/AC-link input data stream pairs
» Multi-channel AC-link supported alternatively
» Integrated S/PDIF transmitter with IEC958 line driver
» Digital loopback and stream routing mechanism
» Peak meters on all streams
» MPU-401 MIDI UART port
» ACPI and PCI PMI support

Architecture
» PCI 2.2 I/F with bus mastering and burst modes

Easy System Integration
» I²C subset I/F for E²PROM (configuration and ID storage) and peripherals control
» 23-pin direct access GPIO port
» Windows ® WDM drivers

Package
» 128-pin PQFP (14mm x 20mm body)

Power
» 3.3V operating supply (5V tolerant I/O)

Block Diagram