



Ogg Vorbis Player Circuit VS1000

Tampere, Finland, 12 September 2007 – VLSI Solution announced today the VS1000 Ogg Vorbis audio player circuit.

VS1000 contains a high-performance, low-power VSDSP core, a NAND-FLASH interface, Full Speed USB 2.0, general purpose I/O's, an SPI, a UART, as well as a high-quality stereo variable-sample-rate stereo DAC, an earphone amplifier and a virtual ground buffer. Additionally the VS1000 device integrates three linear regulators and two voltage comparators for dynamic power optimization and monitoring.

As opposed to other existing mainstream player circuits, the device plays Ogg Vorbis compressed audio. The Ogg Vorbis codec is generally acknowledged to provide better sound quality than MP3, WMA and LC-AAC with low bit rates. It is also free of royalties and patent issues.

VS1000 has excellent audio quality (96 dB dynamic range), low power consumption (total 70 mW in a complete player application) and low cost (2 USD in 1k qty). These features make the device attractive for many high-volume consumer applications such as talking books, audio guides and promotion of CD quality audio content.

The device is supported with a complete product example and development kit. A typical application requires just non-volatile memory (such as Flash or ROM) and a 12 MHz crystal in addition to the device.

The application firmware can be customized by loading parts of it from external memory during device boot. Code can also be dynamically loaded from external memory during program execution. The USB firmware supports content loading from PC by using a standard Mass Storage Device driver. The content can be encrypted with customised algorithms.

The device includes VLSI Solution's EarSpeaker Spatial Processing algorithm. This makes listening via headphones pleasant, and the stereo image more natural since the sound sources appear in front of the listener instead of being inside the head.

The device has been qualified for industrial temperatures (-40...+85C). It uses the LQFP48 7x7x1.4mm package. Samples, development KITS as well as volume shipments are immediately available.

More information is available in <http://www.vlsi.fi/products/icprod.shtml>

