VS1053 – A multi-format high performance audio codec

Tampere, Finland, 13th of September 2007 - VLSI Solution announced today the VS1053 audio decoder/encoder IC.

VS1053 is the most advanced slave audio circuit of VLSI Solution's product family. In addition to being able to decode MP1, MP2, MP3, WMA, WAV, IMA ADPCM, General Midi 1, Ogg Vorbis, LC-AAC and HE-AAC file formats, it can also record in IMA ADPCM and Ogg Vorbis file formats.

The device features low power and high performance. The integrated DAC has 100 dB SNR, thus it can accurately reproduce all industry standard formats. The sophisticated HE-AAC decoder is able to provide high quality sound for low bit rate internet streaming files.
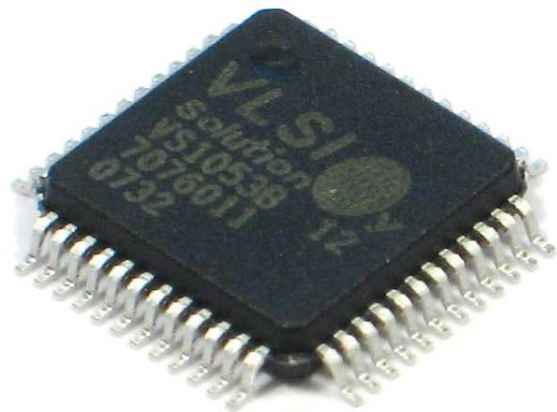
The on-chip stereo ADC features over 90 dB SNR, thus providing high-quality recording from the line out or headphone connectors of external music devices. For recording, Ogg Vorbis encoder can be loaded into the customization RAM of the device to achive near CD quality stereo sound at medium bit rates (100 kbit/s), or speech-quality mono sound at bitrates lower than 20 kbit/s. The Ogg Vorbis encoder will be available for free download in October 2007.

The device has 16 KiB of customization program RAM memory which is more than three times the memory of VLSI's earlier audio codecs. The program RAM broadens the capabilities of VS1053 to include new audio applications such as echo cancellation for mobile phone or VOIP.

VS1053 contains VLSI Solution's proprietary EarSpeaker Spatial Processing technology. This emulates a listening room to move music outside the listener's head as if it would come from real loudspeakers.

The device runs with any external clock between 12 and 13 MHz. This makes it possible to use the USB or GSM clock domains of an existing application.

VS1053 is offered in LQFP-48 7x7x1.4mm RoHS compatible package. Engineering samples and evaluation kit are immediately available. Volume production is expected to start Q1/2008.

Preliminary Datasheet is available in http://www.vlsi.fi/download/download.shtml