

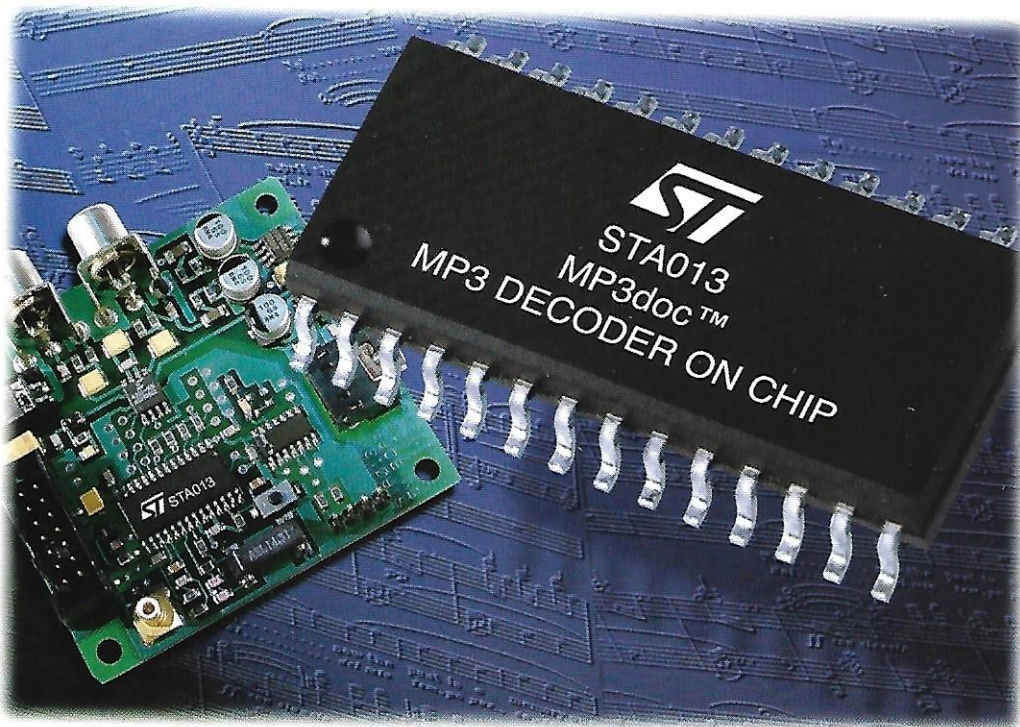
ST Presents MP3 Decoder Chip at CeBIT Show in Germany

STA013 demonstrated in public for first time at Hannover-based consumer electronics show.

by Andrea Onetti in Agrate

At the CeBIT show in Hannover, Germany, March 18-24 1999, ST presented for the first time a new MPEG Layer 3 (MP3) Audio Decoder Chip aimed at personal stereo and PC applications. Called STA013, the new chip is one of only two currently available on the market and outperforms its only rival.

MP3 is a standard for audio compression that gives almost CD quality but requires only one tenth of the storage space or bandwidth. A typical five minute song requires about 50Mbytes of data on a compact disk, but this can be reduced to just 5Mbytes using MP3 compression. MP3 is widely used in Internet as a medium for distributing music because it would be impractical to download uncompressed files of tens of megabytes. On a PC the MP3 files are usually decoded by software. Even the standard Windows Media Player can decode MP3 files.



Portable MP3 audio players like Saehan's "MP3Man" and Diamond Multimedia's "Rio" store compressed audio files in flash memory and play it back through an MP3 decoder chip. No mechanism, tape or disc is needed. ST's new STA013 MP3 Audio Decoder IC is aimed at players like this and offers the lowest consumption on the market.

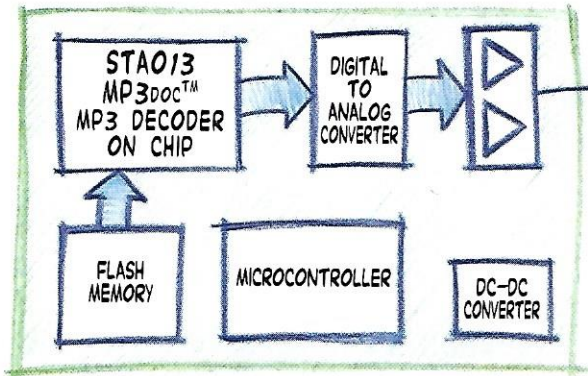
Recently a new class of consumer product has been invented to take advantage of MP3 technology — the 'mechaless' personal stereo, a walkman-like device that has no mechanism and needs no tape or disc. These

personal stereos store music in flash memory and play it back through an MP3 decoder chip. Today the owners of these stereos

download the music files from their PCs to the portable player, but in future there may be music download points in stores or even in public places. The main selling point of these players is that they are completely immune to shocks and vibration. From the makers point of view they are simple to manufacture because they have no mechanical parts. This makes them attractive to companies that are new to the market.

So far only two companies have the knowhow and licenses to make an MP3 hardware decoder IC — Micronas Intermetal (formerly ITT Semiconductors) and STMicroelectronics — and this is because they are the two companies chosen by WorldSpace to develop Starman receiver chipsets, which use MP3 coding for digital satellite radio. The ST chip has an important advantage over its rival: lower current consumption — just 45mA at 3V. This is thanks to our optimized DSP architecture based on Very Long Instruction Word (VLIW) techniques that is ideal for audio applications.

Samples of the STA013 are already available and a datasheet can be downloaded from www.st.com. Our application engineers have developed an evaluation board that can be used with a PC to demonstrate and



Inside a typical MP3 player there will be an MP3 decoder chip like the STA013, some flash memory, a micro, a memory, digital-analog converters, a power audio amplifier and a 1.8 to 3V DC-DC converter. The STA013 is currently available in a compact SO28 package, a slimmer TQFP version — STA013T — will be added later.

evaluate the product. In addition the Central R&D department in Agrate has developed a demo unit that includes both the STA013 and prototype 'AnalogFlash' multi-level-cell memory that stores four digital bits as 16 levels in conventional Flash-EEPROM memory cells.

Evolutions of the STA013 already in development include a low profile version in a TQFP package — type STA013T — which is aimed at ultra thin applications. Another version planned includes a G.723 ADPCM - Adaptive Differential Pulse Code Modulation - encoder/decoder which adds voice recording capability.

To find out more: contact Andrea Onetti in Agrate (050-6440) for information about the STA013, contact Pierluigi Rolandi in Agrate (050-6251) for details about the AnalogFlash memory, visit www.mp3.com for background and news about MP3, visit www.messe.de/cb99/index_e.html for details about CeBIT. Text of the press release and high quality photos are on tpa.agr.st.com.

