SigmaTel D-Major Audio System-on-Chip (STMP3520)

ABOUT THIS DEVICE

SigmaTel, the leader in the flash-based MP3 player market segment, has released the D-Major family of portable audio System-on-Chip (SoC) devices.

There are four main criteria when selecting a component for an audio system: quality, off-the-shelf components, cost, and time to market. With the 3rd generation audio decoder, code named D-Major, SigmaTel has delivered on all of these criteria and surpassed the competition by providing a small form factor (SoC) and low power consumption. The audio codec, DSP, USB interface, and general purpose I/O integrated functions help to reduce the Bill of Materials (BOM) by as much as 30% compared to competitors.

With over nine million units shipped in 2003, and having been designed in some of the top selling MP3 players, the SigmaTel D-Major family provides high quality audio playback in portable devices.

APPLICATIONS

SigmaTel's D-Major product family is designed for long battery life and low cost designs that make it ideal for MP3 flash players, PDAs, cell phones, language learners, jukeboxes, and MP3 CD players. It has already been designed into some of the top selling MP3 players.

COMPETING AUDIO CODECS

Wolfson, Micronas, Cirrus Logic, STMicroelectronics, Texas Instruments, PortalPlayer

DEVICE Highlights

- 3rd generation audio decoder
- SoC functions reduce BOM
  - Audio codec
  - DSP
  - Hi-speed USB Interface
  - General purpose I/Os
- On-chip RAM and ROM
- 24-bit DSP
- Advanced power management techniques providing low power consumption
- Small form factor
- High performance 18-bit ΣΔ technology
- Line-in to Line-out SNR >90dB
- Integrated battery charger
- Integrated head phone driver and amplifier

For information on this device and others contact:

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An in-depth analysis of the mixed signal sections of the SigmaTel SMTP3520 Audio SoC is available in our Key Feature Analysis report that provides a comprehensive look at the design architecture and implementation techniques involved in achieving a high audio quality and low power consumption system.

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