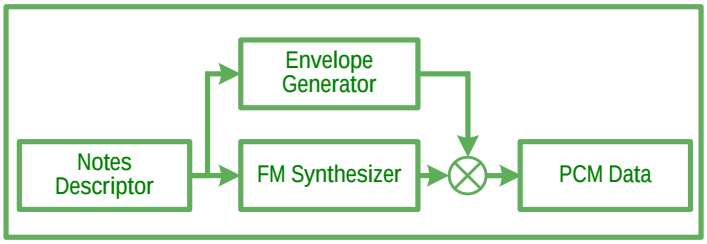
DATASHEET

SPIRIT DSP
Voice & Video Engine Experts

SPIRIT SP-MIDI Decoder

SP-MIDI stands for Scalable Polyphony Musical Instrument Digital Interface. Scalable Polyphony MIDI was planned as a solution for 3G mobile applications and systems; as an alternative to the fixed 16-note polyphony. For mobile applications, SP-MIDI provides a flexible way for both the system operator and the mobile terminal manufacturer to address various customers' needs. For example, some lower-cost phones have only 16-note polyphony, while higher-priced models have 64-note polyphony. Yet, with this solution, the same content can be played on either phone.

SPIRIT SP-MIDI Decoder is a highly efficient implementation of Scalable Polyphony MIDI standard. The decoder supports both MIDI and SP-MIDI formats.



Features

- Variable number of channels
- Variable sampling rate
- MIDI format 1 and format 0 supported
- Up to 32 tracks of SMF format 1 input streams
- Both MIDI SP and MIDI formats supported

Benefits

- Ideal for resource constrained applications
- Easy integration and fast time to market
- High sound quality

Key Features

- Full SP-MIDI standard compliance
- Low CPU load
- Small memory footprint
- Simple API

Applications

- Mobile phones
- Entertainment devices
- Portable musical instruments

Availability

- ARM Call
- TI OMAP Call
- TI C6xx Call
- StarCore Call
- MIPS Call

Specifications

- Format supported: MIDI according to "The Complete MIDI 1.0 Detailed Specification" v. 96.1 and "Scalable Polyphony MIDI" v. 1.0a
- Input data: Format 0 or Format 1 MIDI
- Output data: 16-bit PCM data
- Number of voices: variable
- Sampling rate: variable

Resource Requirements

PLATFORM	ARM7/9/9E/11
Average MIPS per voice	1.3
Peak MIPS per voice	2.5
Code Memory, KB	6.5
Constant Memory, KB	2.5
Dynamic Memory, Bytes	680 + 70 Number of voices
Total Memory, KB	11.0

**Performance figures for Motorola 56K are given for estimation purposes only, **MIPS are measured using simulator with 0-WS, MIPS are specified for 22 kHz*

CONTACTS

www.spiritdsp.com
sales@spiritdsp.com

RU & EU: +7-499-995-23-85
USA: +1-916-955-4507
Japan: +81-3-6361-8086
India: +91-9833-894005
China: +86-136-0192-2495
Taiwan: +886-2-2888-1010 ext. 100
Korea: +82-17-232-3878
Singapore: +65-9380-4061
Vietnam: +84-24-3772-7766