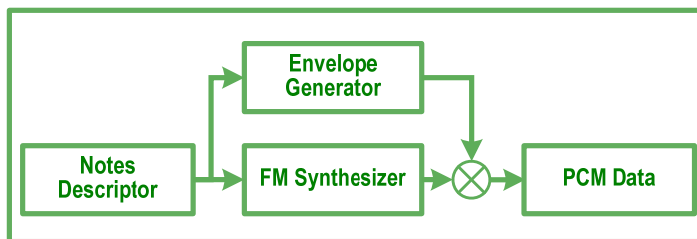


## SPIRIT SP-MIDI Decoder

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

### 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

### 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 OMAP3 Call
- TI C6xx Call
- StarCore Call
- MIPS Call

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