

Epson Introduces Multilingual Text to Speech Synthesis Chip

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Epson today announced availability of its multilingual text-to-speech (TTS) synthesis chip for embedded applications. The S1V30100 is a highly integrated companion chip that provides a complete decode path from text input to analog output via headphones or audio line level output signals. The chip can be easily integrated with a wide range of host devices and microcontrollers using a message protocol that runs over either a UART or an SPI link.

The S1V30100 contains Fonix DECtalk v5.0 as its TTS engine, and the chip supports five languages: US English, French, German, Castilian Spanish, and Latin American Spanish. Further languages, such as Japanese, Chinese, and Korean, are currently under development. The chip also supports G.726 ADPCM encoding and decoding for pre-recorded speech at sampling rates of 24, 32, or 40 kbits/s, and has the option to support MP3 and/or AAC decoding of music data if required.

Target applications for the S1V30100 include speech-enabled portable devices, assistive devices for speech or visually impaired users, educational toys, automotive navigation systems, etc. The on-chip A/D and D/A converters can also be accessed directly by the host processor via an I2S interface, thereby allowing general audio data to be input or output to/from the host processor system.

The key features of the S1V30100 are:

- Multilingual, unconstrained, 5-language TTS (Fonix DECtalk(R)).

- G.726 ADPCM recording and playback.
- MP3 and AAC audio decoding.
- On-chip mono A/D converter and stereo D/A converter (sampling frequencies up to 48 kHz, with 16-bit audio samples).
- Headphone and line level analogue outputs.
- UART or SPI Host Interface.
- 1.8V core operation; 3.3V I/O.
- 160-pin PFBGA package (10mm x 10mm).
- Non-volatile storage area for user dictionaries and storage of frequently-used text/data files and/or recorded speech data.

A complete PC-based development/evaluation kit is available.

Source: Epson

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