# Voice MCU – S1C31D50

Simple solution for complex machine to human communication
S1C31D50 Key facts

- Cortex-M0+ with 192kB internal Flash for Sound EOV file and application running up to 16Mhz

- Sound HW processor w/ 2-ch mixing & voice speed conversion

- QSPI Flash interface to extend the audio up to 120 min.

- Serial interfaces like SPI, UARTs, I2C & 12 Bit ADC

- Wide V_{DD} range of 1.8V up to 5.5V
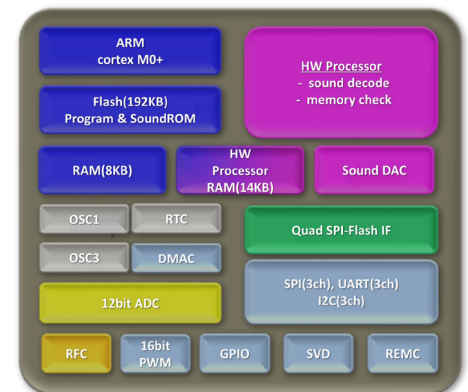
In a lot of applications, the developer spends a lot of time to implement machine to human communi-cation. LEDs or piezo buzzer signals are suitable as simple alerts but for a more complex need of in-formation or alarms often displays are used. more complex need of information or alarms often displays are used.

Why not inform the user about current status or alarm in his well know spoken language?

This might be a question the designer has in mind often but sound production and integration in the application seems just as elaborate as the use of a display.

But now with Epson's Voice/Audio device tool chain this has become very easy:
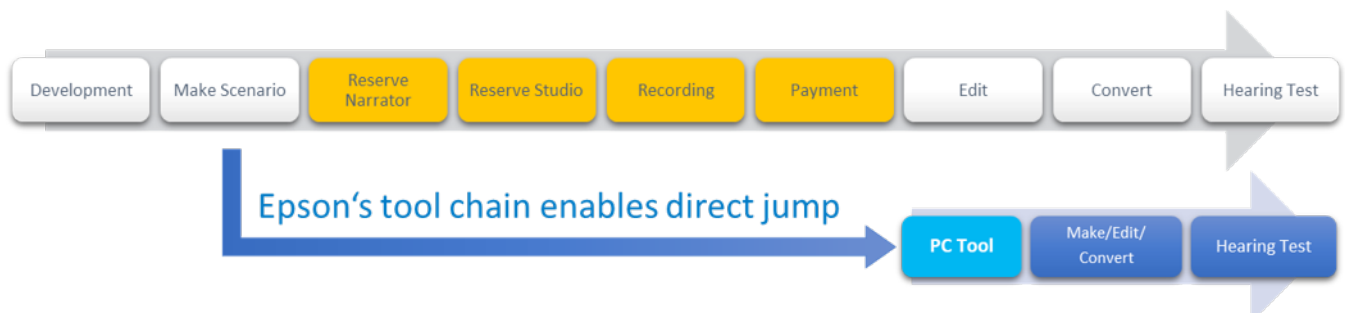
Epson gives the developer a simple to use text-to-speech tool (Esper II - free of charge) to generate highly compressed voice data. Decoded by the S1C31D50, a natural sounding and clearly articulated voice becomes audible. An integrated audio hardware processor, DAC and 2 channel mixer makes it easy to connect an amplifier and speaker depending on the needs of the application.
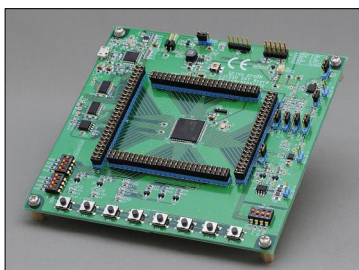
PC Tool Esper II facts

- Guided voice data production process in 4 steps

- German, English, French, Italian, Spanish, Russian & several Asian language support

- Pronunciation fine tune possible

- Only 120kB/min with 16bit Sampling