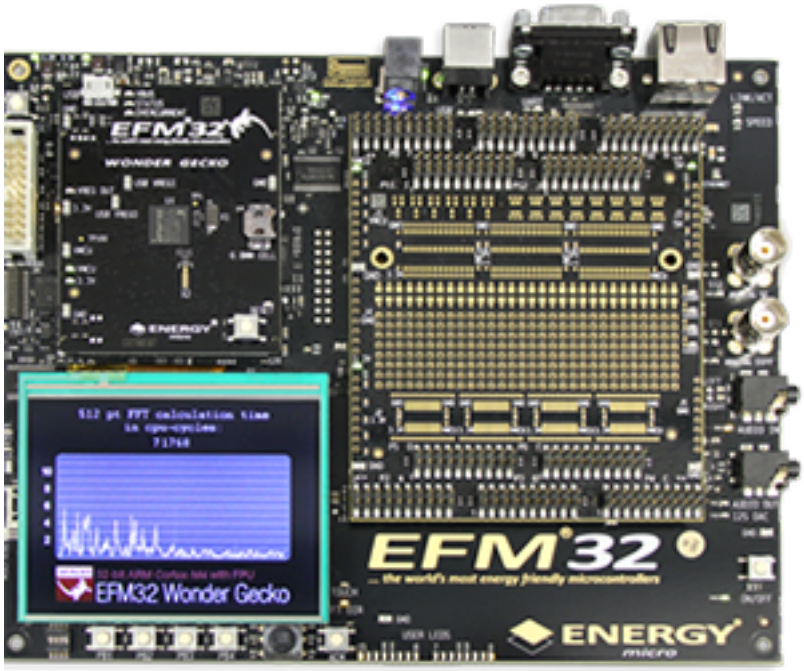
Development kits include a built-in J-Link debugger



Silicon Labs introduced development kits and application software demonstrations for the EFM32 Wonder Gecko microcontroller (MCU) family, which was developed by Energy Micro, recently acquired by Silicon Labs. The Wonder Gecko MCU line is based on the ARM Cortex-M4 processor core, which provides a full DSP instruction set and includes a hardware floating point unit (FPU) for faster computation performance. The development kits and software examples are designed to help embedded engineers leverage 32-bit digital signal control with the high-performance CPU and extremely low standby power modes.

To speed up the design time, the EFM32 development kits include a built-in J-Link debugger and come with software examples using each kit's built-in features:

· An audio pre-amplifier equalizer that digitizes the audio connector signal with the MCU's on-chip analog-to-digital converter (ADC) and subsequently generates the output via a digital-to-analog converter (DAC)

· An audio frequency analyzer using the kit's audio connector and performing a Fast Fourier Transform (FFT) to display a frequency plot on the development kit's LCD

· An application example using the kit's onboard light sensor for 10-500 Hz FFT analysis.

These software demonstrations also enable designers to evaluate the differences between hard and soft floating-point operations and compiler optimization, as well as the CPU cycle count.

The example projects are coded using algorithms that are part of the Cortex Microcontroller Software Interface Standard (CMSIS) DSP function library, which includes complex FFT, finite impulse response (FIR) filters, matrix and vector operations, and statistical analysis. CMSIS provides a vendor-independent hardware abstraction layer for ARM Cortex-M processors.

Silicon Labs' complimentary Simplicity Studio software suite includes all the necessary CMSIS, board support package (BSP) and documentation for the development kits including a Wonder Gecko white paper highlighting the 32-bit processing, DSP and FPU performance benefits of the EFM32 Wonder Gecko MCU family. The white paper also illustrates how the Wonder Gecko MCUs achieve high levels of 32-bit performance while delivering best-in-class energy efficiency.

Pricing and availability

Silicon Labs' EFM32 hardware evaluation platforms for the Wonder Gecko MCU family are available now. The EFM32WG-STK3800 starter kit, priced at $79 (USD), features an LCD segment display, light and touch sensors, and a USB interface to a host device. The full-featured EFM32WG-DK3850 development kit, priced at $349 (USD), includes a QVGA resistive-touch color display, audio connectors, a joystick, switches and a potentiometer for additional user controls. Both development kits provide advanced energy monitoring and real-time power profiling and are supported by the SEGGER J-Link debugger and the Simplicity Studio developer tools.

For more information and to order the EFM32 development kits for the Wonder Gecko MCU family, visit www.silabs.com/cortex-m4-kit [1].

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[1] http://www.silabs.com/cortex-m4-kit