Energy Micro debuts a hundred new low-power microcontrollers

ECN Europe

Energy Micro [1] has introduced 100 new EFM32 Gecko energy friendly microcontrollers. Pin and code compatible with the existing Gecko and Tiny Gecko products, the new ARM Cortex-M3 based Leopard Gecko and Giant Gecko microcontrollers bring memory configurations up to 1MB, more package choice and additional energy saving, connectivity and display driving options.

[2]

Picture: Energy Micro

Based on Energy Micro's low power MCU architecture and peripheral function blocks, EFM32 Gecko microcontrollers are capable of achieving an active mode current consumption of only 160µA/MHz and provide a deep sleep mode with RTC running that consumes just 400nA, a shut-off mode with GPIO wake-up consuming only 20nA and wake-up time from sleep modes being as short as 2µs.

The Leopard Gecko product family is composed of 60 MCUs, providing 32KB RAM as standard and Flash of either 64KB, 128KB and 256KB. At the top end of the Energy Micro product portfolio, the 40 MCU Giant Gecko family provides Flash configurations of either 512KB or 1024KB with 128KB of RAM. An extended range of package options comprises QFN64, QFP100, BGA112 and new QFP64 and 7mmx7mm small form factor BGA120 packages. The latest low power Geckos also take CPU operating speeds up to 48MHz.

A new feature introduced by the Leopard Gecko and Giant Gecko product families is a 400nA back-up power mode, enabling the RTC to keep running and providing 512 back-up register bytes, thereby protecting against clock reset and data loss on a momentary power loss. To help further reduce external component counts, the

latest MCUs also integrate 3 on-chip operational amplifiers.

As well as Energy Micro's low power 8×36 segment LCD controller, the new MCUs also introduce the added option of a 320×240 dot direct drive TFT controller capable of driving display updates without CPU intervention, enabling further system power savings to be made in a wider variety of applications.

A USB 2.0 full speed connectivity option introduced on Leopard and Giant products supports host and OTG protocols and up to fourteen 2KB buffered end points, while a built-in 3.3V regulator also allows users to run the MCU from USB link power. Additional communication options include 5 standard USART/UART serial interfaces and Energy Micro's Low Energy UART, drawing only 150nA at 9600baud.

The LESENSE function block, previously integrated into Energy Micro's Tiny Gecko family, is also included in the low power Leopard Gecko and Giant Gecko families. A generic low energy sensor interface, LESENSE enables monitoring of a mix of up to 16 capacitive, inductive or resistive sensors independently of the processor core in the microcontroller's sub-microamp Deep Sleep mode.

SOURCE [3]

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