Royalty-free RTOS Now Available for Energy-Efficient Microcontrollers

Express Logic, Inc. announced ThreadX® RTOS support of Energy Micro's Cortex™-M3-based EFM®32 microcontroller (MCU) family. Designed for small footprint, demanding real-time control, the ThreadX RTOS is a perfect match for the EFM32 Gecko, which targets energy-sensitive real-time control applications including energy, water, and gas metering, building automation, alarm and security, and portable medical/fitness equipment.

Energy Micro develops markets and sells ultra-low power microcontrollers using the industry leading 32-bit ARM® Cortex-M3 architecture. ThreadX's limited memory usage and short entry-return from power-saving sleep ideally suits the combination of EFM32 microcontroller's energy friendly autonomous low-power features and the Cortex-M3 CPU. This combination is critical for bringing new safe and energy-friendly medical equipment and industrial systems to life.

"The ThreadX RTOS offers the high-speed and small memory footprint crucial to the energy-sensitive markets the EFM32 Gecko microcontrollers target," commented Oyvind Janbu, Energy Micro's CTO. "Designing reliable and long-lasting battery-operated applications requires a framework that reduces overhead and response time. ThreadX and EFM32 devices provide an unmatched solution."

The EFM32 Gecko microcontroller family consumes a fraction of the energy required by other 8-, 16- and 32-bit microcontroller solutions. The EFM32 Gecko MCU is in full production, and Energy Micro has revelead details of the software and pin-compatible Tiny Gecko and Giant Gecko products. A comprehensive tool suite supports the Gecko MCU, and the unique energyAware Profiler enables designers to perform real-time energy debugging directly on their system.

Express Logic's ThreadX® RTOS offers a robust library of application-callable operating system services that simplify and optimize the performance of an embedded system. ThreadX is designed for microcontroller-based applications and features a small memory footprint of under 6KB so it can reside in even the most limited on-chip MCU memory. ThreadX provides preemptive, real-time, priority-based scheduling for optimum responsiveness and high performance and includes services such as thread scheduling, message passing, resource allocation, synchronization, and interrupt management.

ThreadX is complemented by FileX®, a full embedded file system, NetX™, a rich but small-footprint IPv4/IPv6 TCP/IP stack, USBX™, a full USB Host/Device/OTG stack, and PEGX™, a graphics development toolkit. TraceX®, Express Logic's graphical real-time event analysis development tool, also is available for the EFM32 Gecko. ThreadX is provided with full source code and is fully integrated into the IAR Embedded Workbench IDE.

A free evaluation version of ThreadX and a demonstration program in source code form are available for the EFM32 Gecko from Express Logic's web site, www.rtos.com.

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