Microcontrollers feature ARM Cortex-M0+ processor, tout energy efficiency

Freescale Semiconductor is offering alpha samples of its Kinetis L Series microcontrollers (MCUs) built on the ARM Cortex-M0+ processor. These MCUs offer the opportunity for users of legacy 8- and 16-bit architectures to migrate to 32-bit platforms and bring additional intelligence to everyday devices without increasing power consumption and cost or sacrificing space. Applications, such as small appliances, gaming accessories, portable medical systems, audio systems, smart meters, lighting and power control, can now leverage 32-bit capabilities and the scalability needed to expand future product lines – all at 8- and 16-bit price and power consumption levels. The company asserts ARM Cortex-M0+ processor consumes approximately one-third of the energy of any 8- or 16-bit processor available today, while delivering between two to 40 times more performance. The Kinetis L series supplements the energy efficiency of the core with the latest in low-power MCU platform design, operating modes and energy-saving peripherals. The result is an MCU that consumes 50 uA/MHz in very-low-power run (VLPR) mode and can rapidly wake from a reduced power state, process data and return to sleep, extending application battery life.

Features common to the Kinetis L series families include:

- 48 MHz ARM Cortex-M0+ core
- High-speed 12/16-bit analog-to-digital converters
- 12-bit digital-to-analog converters
- High-speed analog comparators
- Low-power touch sensing with wake-up on touch from reduced power states

- Powerful timers for a broad range of applications including motor control

The first three Kinetis L series families:
- Kinetis L0 family – Includes eight to 32 KB of flash memory and ultra-small 4mm x 4mm QFN packages. Pin-compatible with the Freescale 8-bit S08P family. Software- and tool-compatible with all other Kinetis L series families.
- Kinetis L1 family – with 32 to 256 KB of flash memory and additional communications and analog peripheral options. Compatible with the Kinetis K10 family.
- Kinetis L2 family – adds USB 2.0 full-speed host/device/OTG. Compatible with the Kinetis K20 family.

The Kinetis L series is pin- and software-compatible with the Kinetis K series (built on the ARM Cortex-M4 processor), providing a migration path to DSP performance and advanced feature integration.

Freescale Semiconductor
512-895-7675, www.freescale.com [1]

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Links:
[1] http://www.freescale.com