Kinetis L Series, World's Most Energy-Efficient Microcontrollers

Kinetis L series 32-bit devices, initially announced earlier this year, are the first to be featured on the new Freescale Freedom development platform, a small, low-power, cost-effective evaluation and development system perfect for quick application prototyping and demonstration.

The first member of the Kinetis L series, the KL25 MCU, and the Freescale Freedom development platform are readily available today through global semiconductor and electronic component distributors and suppliers, including element 14, Digi-Key Corporation and Mouser Electronics. More than 15,000 Freescale Freedom development platforms have been ordered and already begun shipping.

“We’ve driven an aggressive timeline to get the world’s most energy-efficient MCUs into our customers’ hands as soon as possible,” said Geoff Lees, vice president and general manager of Freescale’s Industrial & Multi-Market MCU business. “Six months after the announcement of the ARM Cortex-M0+ core, Freescale is delivering the fully qualified Kinetis L series in volume production quantities to help legacy 8- and 16-bit users ease the transition to 32-bit.”

KL25 features

Each Kinetis L series family includes scalable flash memory options, pin counts and analog, communication, timing and control peripherals, providing easy migration paths for end product line expansion. The KL25 MCU features include:

- 48 MHz ARM Cortex-M0+ core
- Down to 40 uA/MHz code execution from flash memory
- 32 KB to 128 KB of flash memory
- High-speed 12/16-bit analog-to-digital converter
- 12-bit digital-to-analog converter
- High-speed analog comparator
- Low-power touch sensing
- Powerful timers for a broad range of applications including motor control
- USB 2.0 full-speed host/device/OTG
- Pin- and software-compatible with the Kinetis K20 family, providing a migration path to DSP performance and advanced feature integration

World-class enablement

The Kinetis L series is supported by the Freescale Freedom development platform, Processor Expert software including an MQX™ Lite RTOS component, the Solution Advisor and the Tower System modular development platform for rapid prototyping, along with third-party development resources from the extensive ARM ecosystem.

The Freescale Freedom hardware provides easy access to the MCU I/O pins in an industry-standard form factor with a rich-set of third-party expansion board options. An integrated open-standard serial and debug interface,

OpenSDA, offers an easy-to-use mass-storage device mode flash programmer, a virtual serial port and classic programming and run-control capabilities.

In addition, Freescale continues to grow the Tower System portfolio with the introduction of the TWR-KL25Z48M controller module. This new Kinetis L series module provides advanced evaluation and rapid prototyping capabilities that can leverage the growing Tower System portfolio. The TWR-KL25Z48M features the OpenSDA debug interface, capacitive touch pads, a Tower System plug-in socket and much more.

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