

LAPIS Semiconductor Announces an Ultra-Low Power, Ultra-Compact Sensor Hub Microcontroller for Smartphones & Accessories

The unique sensor hub system solution includes ROHM sensors and Kionix accelerometer and software to enable innovative cloud-based services for smartphones

SAN DIEGO, Calif. – June 6, 2012 – [LAPIS Semiconductor](#) (formerly OKI Semiconductor), a ROHM Group company, announces the development of the [ML610Q792 Sensor Hub Microcontroller](#)—the industry’s smallest ultra-low-power microcontroller designed for integrated, low-power control of multiple sensors in smartphones.

The ML610Q792 makes it possible to deploy new cloud-based features and services in smartphones that would otherwise be prohibitive due to increased power consumption. It logs user environment data and detects user activity without disturbing the host processor. And its remarkably low power consumption not only prolongs battery life, but enables support for wireless communication in compact products like pedometers and smartphone accessories.

The microcontroller incorporates an original high-performance 8-bit RISC CPU Core (U8) and 16-bit coprocessor for arithmetic calculations. Dual interfaces allow for both sensor connection and connecting to the main chipset, while the ultra-compact WL-CSP form factor (3.1mm x 3.0mm) supports high-density designs. In addition, a development board containing multiple sensors and drivers is provided along with a Software Development Kit (SDK) that includes sample source code and libraries for data logging, calorie calculation, pedometer function, and device drivers for interfacing with the host processor.

One of ROHM Group’s future-growth strategies is to offer total sensor solutions that provide greater added-value through product synergy combining ROHM sensors (proximity, ambient light, Hall ICs, temperature) and Kionix accelerometers and gyroscopes with Lapis Semiconductor low-power microcontrollers.

Microcontroller Features

- Ultra-low power consumption solution for user-activity / user-environment detection
- Ultra-compact 48-pin WL-CSP (3.1mm x 3.0mm) package contributes to smaller designs
- Comprehensive software support including sensor drivers and key algorithms
- Controls multiple sensors installed on smartphones
- Equipped with LAPIS Semiconductor’s original high-performance 8-bit RISC Core
- Low power consumption of 0.6µA or less in HALT mode
- Built-in 64KB Flash ROM, onboard Write supported

Software Development Kit (SDK) Features

- The SDK includes a development board with several sensors
- Driver firmware for each sensor is provided along with sample programs for data logging, pedometer, and activity monitoring with activity detection (i.e. walking, running, riding)
- Includes software development tools and uEASE emulator
- Android drivers under development
- Additional compatible sensors currently being developed

Terminology

1. WL-CSP (Wafer-Level Chip-Scale Package) — Minimizes the LSI package size to roughly the same external dimensions as the chip itself.
2. Software Development Kit (SDK) — A generic term for bundling a development board, sample programs, drivers and various documents in order to allow users to develop customized application programs.
3. uEASE — An on-chip debug emulator for software debugging that can run/stop programs using the microcontroller's debugging functions.

For further information, visit the company website: www.lapissemi.com/en/inquiry/index.html

Pricing: ML610Q792 — Samples: USD \$3.73 plus tax
Software Development Kit (SDK): USD \$869.57 plus tax

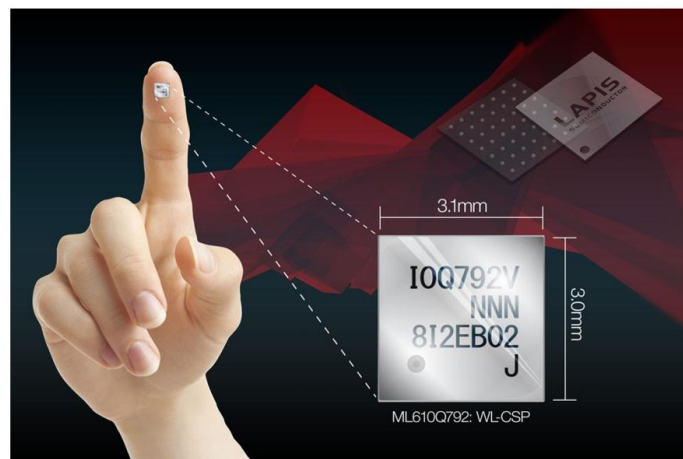
Availability: Now

Delivery: Stock to 6 weeks ARO

About ROHM Semiconductor:

ROHM Semiconductor utilizes the latest in semiconductor technology to develop market-leading system LSIs, discrete components, and module products. ROHM's proprietary production system, featuring some of the most advanced automation technology, is a major factor in keeping it at the forefront of the electronic component manufacturing industry. In addition to standard electronic components, ROHM offers customized product development using equipment designed and built completely in-house. ROHM also employs highly skilled engineers with expertise in all aspects of design, development and production. This allows ROHM the flexibility to take on a wide range of applications and projects and the capability to serve valuable clients in the automotive, telecommunication and computer sectors, as well as consumer OEMs.

LAPIS Semiconductor (formerly OKI Semiconductor) is a ROHM Group Company.



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