NXP and Real Time Engineers Announce Collaboration on FreeRTOS+

- NXP LPC1700 microcontrollers are first to be supported by FreeRTOS+IO and FreeRTOS+CLI extensions
- Add-on components available completely free of charge with NXP microcontrollers

San Jose, California and Bristol, UK (PRWEB) March 29, 2012 -- NXP Semiconductors N.V. (NASDAQ: NXPI) and Real Time Engineers Ltd today announced FreeRTOS+IO and FreeRTOS+CLI support for the NXP LPC1700 series – the first microcontrollers supported by these new extensions to FreeRTOS, the popular real-time embedded operating system kernel. Under a new agreement between NXP and Real Time Engineers, the FreeRTOS+IO peripheral driver interface and FreeRTOS+CLI command line interpreter will be available for use completely free of charge, also under commercial licensing terms, when deployed on an NXP microcontroller.

The market-leading real-time operating system FreeRTOS now supports NXP’s latest generation of ARM® Cortex™-M0, M3, and M4 processor-based microcontrollers, including the 50-MHz LPC1100, 120-MHz LPC1700 and 204-MHz LPC4300 series MCUs. The FreeRTOS kernel itself is freely available for both development and unhindered commercial deployment from http://www.FreeRTOS.org. Further information on NXP’s ARM continuum of microcontrollers is available at: http://www.nxp.com/microcontrollers/

Key Facts / Highlights:
- Unlike the FreeRTOS kernel itself, the new add-on components including FreeRTOS+IO and FreeRTOS+CLI were originally released by Real Time Engineers Ltd under a dual open-source/commercial license. Under the new agreement with NXP, developers using NXP microcontrollers can use FreeRTOS+IO and FreeRTOS+CLI completely free of charge, also for commercial use, when deploying the tools on NXP microcontrollers.
- FreeRTOS+IO provides a Linux/POSIX-like interface to support common on-chip peripherals, abstracting the peripheral interface details, and allowing developers to focus on developing their products. FreeRTOS+IO currently supports UART, I2C, and SSP in SPI mode in polling as well as circular buffer and zero-copy interrupt transfer modes.
- FreeRTOS+CLI provides a user-extendable command-line interface to the target. Examples for implementing commands are provided, such as “run-time-stats” to see the amount of time each task has spent in the Running state, and “task-stats” to see a snapshot of task state information, including stack high water mark. Additional commands, such as the familiar file system “dir”, “del” and “copy” commands, are implemented in a featured example that targets the LPC1769 microcontroller.
- NXP's high-performance LPC1769 microcontrollers are based on the ARM Cortex-M3 processor, and are the first devices in the industry to be supported by FreeRTOS+IO and FreeRTOS+CLI. The LPC1700 series operates at speeds up to 120 MHz and offers peripherals such as Ethernet, USB 2.0 Host/OTG/Device, LCD Controllers and CAN 2.0B.

Supporting Quotes:
- “FreeRTOS, along with its new FreeRTOS+ extensions, provides a professional-grade OS solution and ease of use for embedded system developers. By making the latest tools freely available for commercial use with our high-performance NXP microcontrollers, we’re offering the key ingredients that engineers need to quickly develop and bring more complex 32-bit devices to market – at an unbeatable cost,” said Jan Jaap Bezemer, director of marketing, microcontroller business line, NXP Semiconductors.

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• “We’re very pleased to offer FreeRTOS support for NXP’s low-power Cortex-M0 and high-performance Cortex-M3 and Cortex-M4 microcontrollers. The popularity of the LPC1769 microcontrollers made it a natural choice as the initial target for our new FreeRTOS+IO extension, and we look forward to working with NXP to extend FreeRTOS+ add-on support for its entire ARM Cortex-M microcontroller range,” said Richard Barry, director and CTO, Real Time Engineers Ltd, owners and maintainers of the FreeRTOS Project.

About FreeRTOS
FreeRTOS™ is an open source embedded RTOS with implementations on more than 31 embedded architectures. In existence for more than 9 years, its popularity has grown tremendously and it has reached a download rate of more than 7000 per month, making it one of the most widely used embedded operating systems in the world. The license allows users to deploy applications without publishing their proprietary application code. It can be freely downloaded from http://www.FreeRTOS.org

About NXP Semiconductors
NXP Semiconductors N.V. (NASDAQ: NXPI) provides High Performance Mixed Signal and Standard Product solutions that leverage its leading RF, Analog, Power Management, Interface, Security and Digital Processing expertise. These innovations are used in a wide range of automotive, identification, wireless infrastructure, lighting, industrial, mobile, consumer and computing applications. A global semiconductor company with operations in more than 25 countries, NXP posted revenue of $4.2 billion in 2011. Additional information can be found by visiting www.nxp.com.

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Forward-looking Statements
This document includes forward-looking statements which include statements regarding NXP’s business strategy, financial condition, results of operations, and market data, as well as any other statements which are not historical facts. By their nature, forward-looking statements are subject to numerous factors, risks and uncertainties that could cause actual outcomes and results to be materially different from those projected. These factors, risks and uncertainties include the following: market demand and semiconductor industry conditions; the ability to successfully introduce new technologies and products; the end-market demand for the goods into which NXP’s products are incorporated; the ability to generate sufficient cash, raise sufficient capital or refinance corporate debt at or before maturity; the ability to meet the combination of corporate debt service, research and development and capital investment requirements; the ability to accurately estimate demand and match manufacturing production capacity accordingly or obtain supplies from third-party producers; the access to production capacity from third-party outsourcing partners; any events that might affect third-party business partners or NXP’s relationship with them; the ability to secure adequate and timely supply of equipment and materials from suppliers; the ability to avoid operational problems and product defects and, if such issues were to arise, to correct them quickly; the ability to form strategic partnerships and joint ventures and to successfully cooperate with alliance partners; the ability to win competitive bid selection processes to develop products for use in customers’ equipment and products; the ability to successfully establish a brand identity; the ability to successfully hire and retain key management and senior product architects; and, the ability to maintain good relationships with our suppliers. In addition, this document contains information concerning the semiconductor industry and NXP’s business segments generally, which is forward-looking in nature and is based on a variety of assumptions regarding the ways in which the semiconductor industry, NXP’s market segments and product...
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