September 17, 2013

Microchip and element14 Announce Raspberry Pi® chipKIT™ Expansion Board; World's First with Prototyping-Friendly 32-bit MCU Package

chipKIT™ Pi Board Also First to Offer Raspberry Pi Users 3.3V Arduino™ Compatibility and a 3.3V MCU in Prototyping-Friendly Packaging; Enables Easy Connections to 3.3V Raspberry Pi Processor

CHANDLER, Ariz.--(BUSINESS WIRE)-- Microchip Technology Inc. (**NASDAQ: MCHP**), a leading provider of microcontroller, mixed-signal, analog and Flash-IP solutions, today announced the expansion of its **Arduino™ compatible chipKIT™ platform ecosystem**, including a new **Raspberry Pi® tool** that it co-developed with partner element14—the chipKIT Pi Expansion Board. On the software side, volunteers from the chipKIT and Arduino communities collaborated with Microchip's engineers to expand the free chipKIT Multi-Platform IDE (MPIDE), to allow users to create, compile and program Arduino sketch-based chipKIT applications within the Raspberry Pi operating system. The chipKIT MPIDE is open source and compatible with the Arduino programming language and development environment. Both of these tools are based on Microchip's 32-bit PIC32 microcontrollers (MCUs) in prototyping-friendly, low pin count SPDIP packages, which was previously only available with 8-bit MCUs for the Arduino community. This enables all users—including hobbyists, academics, makers and professionals—to benefit from the PIC32's high performance, memory and integrated peripherals while using the basic hobbyist prototyping equipment that is found in most home workshops.

Watch a brief video: **http://www.microchip.com/get/598S**

The Raspberry Pi is widely viewed as one of the easiest and most affordable computers on which to program, and recently shipped more than one million units in less than a year on the market. element14's chipKIT Pi Expansion Board is the world's first to enable the development of 3.3V Arduino compatible applications for the Raspberry Pi using a 32-bit, high-performance MCU in a prototyping-friendly package. Because the Raspberry Pi's processor is a 3.3V chip, its digital I/O and communications (I^2C™, UART, SPI) pins require 3.3V. Meaning that existing prototyping-friendly Arduino boards, which are all based on 5V 8-bit MCUs, require users to create or purchase additional components to translate the voltages. The chipKIT Pi can interface directly to the Raspberry Pi I/O Expansion header without any additional components, reducing both cost and design complexity.

In addition to being 3.3V compatible, the chipKIT Pi is also the only Arduino compatible board that brings a 32-bit MCU in a prototyping-friendly package to Raspberry Pi users. Previously, hobbyists, academics, makers and professionals who wanted to develop Arduino applications for the Raspberry Pi using prototyping-friendly, through-hole packages were forced to use boards based on 8-bit MCUs. The chipKIT Pi's 32-bit PIC32 MCU is in an

SPDIP package, so even non-experienced users can easily swap out the pre-populated PIC32 with a new one—without having to replace the entire board.

The PIC32's high level of performance, memory and integrated peripherals allows users to create applications with greater functionality, including touch sensing, audio processing and advanced control. Additionally, users can take advantage of the PIC32's Peripheral Pin Select feature, which provides the flexibility to re-map certain peripheral I/O pins to suit their applications. The chipKIT Pi board and the Raspberry Pi compatible version of the MPIDE software further enable users to tap into the large repository of available Arduino tutorials, reference materials, curriculum and more, to create a diverse array of designs.

"The chipKIT Pi's advanced features simplify Arduino based application development for the Raspberry Pi," said Derek Carlson, Microchip's vice president of Development Tools. "This new expansion board also adds large memory space, fast performance and integrated peripherals for human-interface, audio-processing and advanced-control applications."

Claire Doyle, Global Head of Raspberry Pi, also commented: "We are delighted to partner with Microchip to develop the chipKIT Pi Expansion Board. We are excited by the board's high level of performance, memory and integrated peripherals, which allow users to create applications with a high level of functionality while using prototyping-friendly 32-bit MCU packages."

Pricing & Availability

element14's chipKIT Pi Expansion Board (part # chipKIT Pi) is priced at $28, and boards are expected to become available in the final week of September. Pre register your interest at **http://www.microchip.com/get/BF1A**. Boards can also be pre-ordered today from microchipDIRECT, using part # TCHIP020, at **http://www.microchip.com/get/F567**. Additionally, the Raspberry Pi-compatible version of the chipKIT MPIDE can be downloaded for free, today, from **http://www.microchip.com/get/EU61**. For more information on any of the above products, or for additional chipKIT resources, please visit the chipKIT Community Site at **http://www.microchip.com/get/NHAC**.

Resources

High-res chipKIT Pi Board Photo Available Through Flickr or Editorial Contact (feel free to publish): **http://www.microchip.com/get/MM91**

Video Available Through YouTube or Editorial Contact (feel free to post): **http://www.microchip.com/get/598S**

Follow Microchip:

- RSS Feed for Microchip Product News: **http://www.microchip.com/get/0NPM**

- Twitter: **http://www.microchip.com/get/LTHF**

- Facebook: **http://www.microchip.com/get/6C35**

- YouTube: **http://www.microchip.com/get/VKTU**

About Microchip Technology

Microchip Technology Inc. (NASDAQ: MCHP) is a leading provider of microcontroller, mixed-signal, analog and Flash-IP solutions, providing low-risk product development, lower total system cost and faster time to market for thousands of diverse customer applications worldwide. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at **http://www.microchip.com/get/P5D2**.

Tags / Keywords: Raspberry Pi, Arduino, chipKIT, PIC32, Robotics, Maker, Microcontroller, MPIDE, MIPS

Microchip Technology Inc.
Editorial Contact:
Eric Lawson, 480-792-7182
eric.lawson@microchip.com
or
Reader Inquiries:
1-888-624-7435
http://www.microchip.com/get/NHAC

Source: Microchip Technology Inc.