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PIC24F04KA201 16-bit MCU Family Combines eXtreme Low Power 20 nA Sleep Currents and Small Packages at Less Than $.99 Each in High Volume

CHANDLER, Ariz.--(BUSINESS WIRE)-- Microchip Technology Inc.(NASDAQ: MCHP), a leading provider of microcontroller and analog semiconductors, today announced the low-cost, low pin count PIC24F04KA201 family of 16-bit microcontrollers--the latest to feature nanoWatt XLP extreme low power technology. Starting at less than $.99 each in high volumes, the PIC24F04KA family makes it even more cost effective to take advantage of the world's lowest sleep-current consumption microcontrollers, with typical sleep currents as low as 20 nA. This low power and lower cost, combined with small-footprint 14- and 20-pin package options, makes the PIC24F04KA201 MCU family ideal for battery-powered applications, energy-harvesting applications and other power-constrained applications that are also cost and space constrained.

To watch a head-to-head comparison video of Microchip's PIC$^{(R)}$ XLP microcontroller current consumption vs. the competition, please visit: http://www.microchip.com/get/400189151851852

Today's portable products need to operate longer with less power and more functionality. The new PIC XLP microcontrollers contain features that are ideally suited for applications such as remote sensors powered by energy harvesting or sealed-battery applications, enabling them to run for up to 20 years from a single battery. Additionally, the lower price and smaller footprint of these new devices make them even easier to integrate into space-constrained products where low power and low cost are of primary concern.

The key to the PIC24F04KA201 MCUs' 20 nA sleep currents is Deep Sleep mode. By isolating power to various circuits during sleep, Deep Sleep mode reduces power consumption to a minimum. Additionally, Deep Sleep gives designers the flexibility to customize their applications for the lowest power consumption through multiple internal wake-up sources, such as Brown-Out Resets, interrupts and Watch-dog Timers, all while maintaining the I/O states.

"Microchip is committed to providing the world's lowest power consumption, with more than 50 PIC MCUs featuring nanoWatt XLP technology now in production," said Mitch Obolsky, vice president of Microchip's Advanced Microcontroller Architecture Division. "The PIC24F04KA201 16-bit family is the latest result of this commitment, offering the lowest cost and lowest pin count PIC24, while maintaining the world's lowest sleep currents."

Example applications for the new PIC24F04KA microcontrollers include: Medical (portable and home medical devices, oxygen flow meters, lifestyle/fitness monitors); Industrial (energy harvesting/scavenging, water/gas/heat meters, portable gas sensors, remote sensor

networks, asset tracking, sealed/harsh environment sensors); and Consumer (security-system dongles, sealed disposable electronics, portable electronics, smart cards).

"The extremely low sleep current and numerous wake-up features of Microchip's new PIC XLP microcontrollers should be ideal for battery-operated devices, which actually spend most of the time asleep," said Tom Starnes, embedded processor analyst at the semiconductor research firm Objective Analysis. "The interest in the market for such low-power processors, for use in consumer to industrial applications, is really on the rise."

In addition to being ideal for low-power and space-constrained applications, the PIC24F04KA201 MCU family has high C-code efficiency and computational horsepower, which makes it well suited for applications requiring advanced algorithms. Other key features include:

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--  Up to 16 MIPS operation using 32 MHz internal clock
--  4 Kbytes Flash, and 512 bytes SRAM
--  10-bit, up to 9 channel, 500 ksps Analog-to-Digital Converter
--  mTouch(TM) Capacitive Touch Sensing Peripheral
--  2 Rail-to-Rail Comparators
--  SPI, I2C(TM) and UART modules for serial communications
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Development Tools

Owners of the Explorer 16 development board can purchase a $25 PIC24F16KA plug-in module (part # MA240017), for development with this new 16-bit family. All PIC XLP microcontrollers are supported by Microchip's world-class development tools, including the free MPLAB$^{(R)}$ IDE, the MPLAB REAL ICE(TM) emulation system, the MPLAB ICD 3 in-circuit debugger, the PICkit(TM) 3 low-cost debugger/programmer and Microchip's free C compilers. These tools are available today at http://www.microchip.com/XLPTools.

Availability & Pricing

Both PIC24F04KA201 16-bit family members are available now for general sampling and volume production, with prices starting at less than $.99 each in high volume. The 14-pin package options for the PIC24F04KA200 are: TSSOP and PDIP. The 20-pin package options for the PIC24F04KA201 are: QFN, SSOP, SOIC and PDIP. For additional information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip's Web site at http://www.microchip.com/XLP.

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About Microchip Technology

Microchip Technology Inc. (NASDAQ: MCHP) is a leading provider of microcontroller and analog semiconductors, 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.

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      Diagram:http://www.flickr.com/photos/microchiptechnology/3753596447/sizes/o/in/set-72157617112334437/
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Videos Available Through YouTube or Editorial Contact:

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  --  Low Power MCU Comparison--Microchip vs. the
      Competition:http://www.microchip.com/get/400189151851852
  --  nanoWatt XLP Overview:http://www.microchip.com/get/40018923587963
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Tags / Keywords: Low Cost, Low Power, Low Power MCU, Low Power Microcontroller, Deep Sleep, nanoWatt, nanoWatt XLP, XLP, PIC, PIC24, PIC24F, 16-bit, 16-bit MCU, 16-bit Microcontroller, Battery, Battery Powered, Portable, Handheld, Cordless, Wireless, Energy Harvesting, Remote Sensor Network, Sealed Batteries

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