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Microchip Extends eXtreme Low Power PIC32MM Microcontroller Family

PIC32MM “GPM” Devices are Available with USB Support, Core Independent Peripherals and Memory Scalable to 256 KB in Compact Packages

CHANDLER, Ariz., June 14, 2017 (GLOBE NEWSWIRE) -- New PIC32MM “GPM” microcontrollers (MCUs) are now available from Microchip Technology Inc. (NASDAQ:MCHP). The eXtreme Low Power (XLP) devices feature large memory in small packages, providing ample battery life for space-constrained applications. With the inclusion of several connectivity options, Core Independent Peripherals and feature-rich development boards, the “GPM” MCUs are well suited for digital audio applications, gaming/entertainment devices, Internet of Things (IoT) sensor nodes and portable medical devices. For more information about Microchip’s PIC32MM “GPM” devices visit: www.microchip.com/pic32mm

The XLP PIC32MM “GPM” family of MCUs enables developers to minimize power consumption, board space and development time. The devices provide power-saving options, such as sleep modes with current consumption as low as 650 nA with Random Access Memory (RAM) retention, to greatly extend battery life in portable applications. These PIC® MCUs are available with up to 256 KB of Error Correction Code (ECC) Flash and 32 KB of RAM, providing ample space for application code and communication stacks. The new devices are available in a variety of pin count options ranging from 28 to 64 pins in compact packages as small as 4x4 mm with 28 pins, 5x5 mm with 36 pins and 6x6 mm with 48 pins to optimize the overall design footprint.

The PIC32MM “GPM” family integrates Core Independent Peripherals (CIPs), such as Direct Memory Access (DMA), Configurable Logic Cells (CLC) and a 12-bit Analog-to-Digital Converter (ADC), which allow the system to accomplish tasks in hardware while freeing up the central processing unit (CPU) to do other tasks or to go to sleep. Leveraging these hardware-based CIPs improves execution efficiency while maintaining system flexibility and lowering overall power consumption. These MCUs also include a crystal-less USB device/host/On-the-Go (OTG) and I^2S functionality, crucial for USB audio applications and communication gateways. This family’s accurate on-chip USB oscillator eliminates the need for an external crystal or oscillator reducing overall system BOM cost and board real estate associated with USB applications.

The new family of devices is supported by the MPLAB® Code Configurator (MCC) tool. MCC makes it easy to configure the USB stack, pin assignments and peripherals, significantly accelerating development time. These MCUs are also supported by Microchip’s MPLAB X Integrated Development Environment (IDE) ecosystem and MPLAB XC32 Compiler.

“The PIC32MM ‘GPM’ family extends Microchip’s cost-effective XLP PIC32MM portfolio by adding USB coupled with more memory and pins for growing application requirements,” said

Joe Thomsen, vice president of Microchip's MCU16 business unit. "Supported by the popular MPLAB Code Configurator (MCC) tool, customers can set up their peripherals, pins and generate code with the push of a button, greatly reducing time to market."

Development Support
The new PIC32MM USB Curiosity Development Board is a low-cost development platform that comes fully integrated with a programmer/debugger. The board also features two MikroElektronika mikroBUS™ interfaces that enable support for more than 300 click boards™, a USB Micro B connector and two X32 interfaces that enable access to the PIC32 Audio Codec Daughter Card.

Additionally, the PIC32MM Processor Plug-in Module, which plugs into the Explorer 16/32 Development Board ecosystem for easy evaluation, is available to kick-start development.

Pricing and Availability
The PIC32MM "GPM" devices are available in 64 KB, 128 KB and 256 KB Flash variants with 28-, 36-, 48- and 64-pin packaging options. All device variants are currently available for orders and samples now, with the 28-pin UQFN available early next quarter. Volume pricing for this family starts at $0.97 each in 10,000 unit quantities.

- The PIC32MM USB Curiosity Development Board (DM320107) is available for $27.99 each.
- The PIC32MM0256GPM064 Processor Plug-in Module (MA320023) is available for $25 each.
- The Explorer 16/32 Development Board is available (DM240001-2) for $79.99 each.

For additional information, contact any Microchip sales representative or authorized worldwide distributor. To purchase products mentioned in this press release, go to Microchip's easy-to-use online sales channel **microchipDIRECT** or contact one of Microchip's authorized distribution partners.

Resources
High-res images available through Flickr or editorial contact (feel free to publish):

- PR graphic: **www.flickr.com/photos/microchiptechnology/35039423902/**
- Chip shot: **www.flickr.com/photos/microchiptechnology/35074476521/**
- Block diagram: **www.flickr.com/photos/microchiptechnology/35039422952/**

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