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Microchip Expands XLP Low-Power PIC® Microcontroller Portfolio With Integrated Hardware Encryption Engine

New PIC24F "GB2" MCUs Enable Secure Data Transfer and Storage in Portable Embedded Applications

CHANDLER, Ariz.--(BUSINESS WIRE)-- Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller, mixed-signal, analog and Flash-IP solutions, today announced from the Sensors Expo in Rosemont, IL the expansion of its eXtreme Low Power (XLP) PIC® microcontrollers (MCUs) with the **PIC24F "GB2" family**. This new family features an integrated hardware crypto engine, a Random Number Generator (RNG) and One-Time-Programmable (OTP) key storage for protecting data in embedded applications. The PIC24F "GB2" devices offer up to 128 KB Flash and 8 KB RAM in small 28- or 44-pin packages, for battery-operated or portable applications such as "Internet of Things" (IoT) sensor nodes, access control systems and door locks.

Watch a short video: **http://www.microchip.com/get/65A4**

View a brief presentation: **http://www.microchip.com/get/UTK3**

Several security features are integrated into the PIC24F "GB2" family, to protect embedded data. The fully featured hardware crypto engine, supporting the AES, DES and 3DES standards, reduces software overhead, lowers power consumption and enables faster throughput. This is another example of Microchip's Core Independent Peripherals, which can run with no CPU supervision. Also, a Random Number Generator creates random keys for data encryption, decryption and authentication, to provide a higher level of security. For additional protection, the One-Time-Programmable (OTP) key storage prevents the encryption key from being read or overwritten. These security features increase the integrity of embedded data without sacrificing power consumption. With XLP technology, the "GB2" family achieves 180 µA/MHz Run currents and 18 nA Sleep currents, for very long battery life in portable applications.

For connectivity, the "GB2" family integrates USB for device or host connections, as well as a UART with ISO7816 support, which is helpful for smart card applications. With these features, the PIC24F "GB2" devices protect embedded data while conserving power and maximizing battery life, all in packages as small as 28-pin QFN for medical/fitness applications (e.g., pedometers, wearable fitness, handheld devices), computer applications (e.g., PC peripherals, printers, portable accessories) and industrial applications (e.g., security door locks, access control systems, security cameras, POS terminals, smart card readers, heat/gas meters, IOT sensor nodes). Microchip also has a flexible range of certified wireless modules for Wi-Fi®, ZigBee®, Bluetooth® and Bluetooth Low Energy, making it easy to add wireless connections to a PIC24 "GB2" application.

“With Internet of Things growing at a rapid rate, protecting embedded data and extending battery life are not an option, but a necessity,” said Joe Thomsen, vice president of Microchip’s MCU16 Division. “Our latest eXtreme Low Power family, combined with Microchip’s embedded Wi-Fi and Bluetooth solutions, enable low-power wireless connectivity to Internet-connected things. Designers achieve faster throughput, lower BOM cost, secure data and very long battery life.”

Development Support

The PIC24F “GB2” family is supported by Microchip’s standard suite of world-class development tools, including the **Explorer 16 Development Board** (part # DM240002, $129.99), **PIC24FJ128GB204 Plug In Module** for USB (part # MA240037, $25.00), **PIC24FJ128GA204 Plug In Module** for non-USB (part # MA240036, $25.00) and **USB PICtail™ Plus Daughter Board** (part # AC164131, $60.00). In addition, wireless connections can be added using one of Microchip’s Wireless PICtail Daughter Boards, including the **WiFi PICtail Development Board** (part # RN-171-PICtail, $39.95), and **Bluetooth LE PICtail/PICtail Plus** (part # RN-4020-PICtail, $49.00).

Pricing & Availability

Product variants are available with USB (PIC24FJXXX**GB**2XX) and without USB (PIC24FJXXX**GA**2XX). The PIC24FJ128GB204, PIC24FJ64GB204, PIC24FJ128GA204 and PIC24FJ64GA204 are offered in 44-pin TQFP and QFN packages. The PIC24FJ128GB202, PIC24FJ64GB202, PIC24FJ128GA202 and PIC24FJ64GA202 are available in 28-pin SOIC, SSOP, SPDIP and QFN packages. All of these new MCUs are available today for sampling and volume production, starting at $1.30 each in volume.

For additional information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip’s website at **http://www.microchip.com/get/GNUT**. To purchase products mentioned in this press release, go to **microchipDIRECT** or contact one of Microchip’s authorized distribution partners.

Resources

High-res Images Available Through Flickr or Editorial Contact (feel free to publish):

- Chip Graphic **http://www.microchip.com/get/6RDT**
- Block Diagram: **http://www.microchip.com/get/VE8E**
- PIC24FJ128GA204 Plug-In Module: **http://www.microchip.com/get/KMSH**
- PIC24FJ128GB204 Plug-In Module: **http://www.microchip.com/get/FR1X**
- Application Diagram: **http://www.microchip.com/get/61K2**

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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/FM3N**.

Tags / Keywords: **Embedded Security**, **Encryption MCU**, **Crypto Engine**, **eXtreme Low Power**, **XLP**, **MCU**, **Low Power MCU**, **Secure Key Storage**, **AES MCU**, **RNG MCU**, **ISO7816**, **IOT Sensor Node**, **Internet of Things Sensor Node**, **Data Security**, **Secure Data Transfer**, **Embedded Secure Applications**

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