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Microchip Technology Rolls Out First PIC(R) Microcontrollers Featuring Enhanced Mid-range 8-bit Core

New Family with eXtreme Low-Power nanoWatt XLP Technology Delivers Enhanced C Support; Broad Peripheral Set Includes mTouch(TM) Capacitive Sensing and LCD Drive

CHANDLER, Ariz.--(BUSINESS WIRE)-- Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller and analog semiconductors, today announced the first six members of the PIC16F193X family of microcontrollers (MCUs) featuring Microchip's enhanced Mid-range 8-bit core--the PIC16F1934, PIC16LF1934, PIC16F1936, PIC16LF1936, PIC16F1937 and PIC16LF1937. The new family extends Microchip's PIC(R) MCU portfolio of over 550 compatible members, targeting a wide variety of applications in the appliance, consumer, industrial, medical and automotive markets. The family's increased memory and core capabilities deliver enhanced support for both C and Assembly programmers, and "LF" family members feature Microchip's nanoWatt XLP technology--for extreme low power consumption--enabling designs to achieve world-leading battery lifetime. Continuing in the PIC MCU tradition of integrating extensive peripherals, the new family offers Direct LCD drive and support for mTouch(TM) capacitive touch-sensing solutions.

"We are pleased to announce the first family of microcontrollers based upon our enhanced Mid-range 8-bit core," said Steve Drehobl, vice president of Microchip's Security, Microcontroller and Technology Development Division. "Building upon the worldwide customer acceptance of Microchip's existing Mid-range 8-bit products, the new devices enable new levels of functionality at lower system cost."

Additional features of the PIC16F193X family include:

- Flash program memory up to 14 KB
- Data RAM up to 512 Bytes
- 256 Bytes Data EEPROM
- LCD drive (up to 96 segments)
- nanoWatt XLP technology on the "LF" versions, resulting in sleep currents of 90 nA, Watchdog Timer (WDT) current of 500 nA, and low-power 32 kHz Timer1 oscillator current of 600 nA, all at 1.8V
- mTouch Sensing Solutions peripheral for capacitive touch sensing (16 channels, with support for up to 64 buttons)
- 32 MHz internal oscillator
- Up to 5 Enhanced Capture Compare PWM peripherals with independent time base
- Reduced Interrupt latency
- 16-level hardware stack, with overflow/underflow interrupt
- Low-power 1.8 to 5.5V operation, including full analog peripheral operation
- Master SPI/I2C(TM) and EUSART support for RS-232/RS-485, as well as LIN

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    support
--  Up to 14 channels of 10-bit Analog-to-Digital Conversion (ADC)
--  Two rail-to-rail input comparators with 555 Timer operation
--  4x8-bit and 1x16-bit timers, with extreme low power Real-Time Clock
    (RTC) support
--  Robust and reliable operational monitors, such as Power-On Reset (POR),
    Brown-out Reset (BOR) and low-power Watchdog Timer (WDT)
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With a total of 49 instructions, the PIC16F193X microcontrollers optimize program code and data handling, while increasing efficiency and reducing clock cycles. Future devices with the enhanced Mid-range 8-bit core, offering increased memory and additional I/O, are expected to be released later this year.

Development Tool Support

Microchip offers engineers a complete suite of standard development tools to design with the PIC16F193X microcontrollers, including the unified, feature-rich, user-friendly and free MPLAB(R) IDE, along with a selection of HI-TECH C(R) compilers. The HI-TECH Lite edition is a completely free, fully-functional compiler with no time limitations. For applications with limited program space, the Standard and PRO editions offer denser code and improved performance. There is also a variety of debugging hardware from the popular PICkit(TM) 3 Debug Express ($69.99), to the new In-Circuit Debugger, MPLAB ICD 3 ($219.99), and the MPLAB REAL ICE(TM) In-Circuit Emulator ($495.00). All of these tools can be purchased today at http://www.microchipdirect.com. More information on development tools is available at http://www.microchip.com/developmenttools. The PICkit 3 Starter Kit for the PIC16F193X enhanced core is in development, and is expected to be available in CQ3 2009.

Device Packaging & Pricing

The following table summarizes package options and pricing for the PIC16F193X microcontrollers:

Device	Package Options	10K-Unit Pricing
PIC16F/LF1936	28-pin PDIP, SSOP, SOIC, QFN	$1.24 each
PIC16F/LF1934	40-pin PDIP, TQFP, QFN	$1.40 each
PIC16F/LF1937	40-pin PDIP, TQFP, QFN	$1.47 each

Samples of the new devices are available today, at http://sample.microchip.com. Volume production quantities can be ordered today, at http://www.microchipdirect.com. For further information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip's Web site at http://www.microchip.com/enhanced.

Microchip Customer Support

Microchip is committed to supporting its customers by helping design engineers develop products faster and more efficiently. Customers can access four main service areas at http://www.microchip.com. The Support area provides a fast way to get questions answered;

the Sample area offers evaluation samples of any Microchip device; microchipDIRECT provides 24-hour pricing, ordering, inventory and credit for convenient purchasing of all Microchip devices and development tools; finally, the Training area educates customers through webinars, sign-ups for local seminar and workshop courses, and information about the annual MASTERs events held throughout the world.

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, Ariz., 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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