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18-pin PIC(R) Microcontrollers Feature Microchip's Enhanced Mid-range Core, Industry-Leading eXtreme Low Power Consumption

CHANDLER, Ariz.--(BUSINESS WIRE)-- Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller and analog semiconductors, today announced the PIC16(L)F1826 and PIC16(L)F1827 [PIC16(L)F1826/7] general-purpose 8-bit microcontrollers (MCUs)--the latest PIC(R) MCUs to feature the Company's Enhanced Mid-range core. The first extension of this core into the 18-pin range, the PIC16(L)F1826/7 MCUs provide an advanced peripheral set that includes an mTouch(TM) capacitive touch-sensing module and dual I^2C(TM)/SPI interfaces, along with "LF" versions featuring industry-leading low power consumption via Microchip's nanoWatt XLP eXtreme Low-Power technology. The MCUs' increased speed, ease of use and low cost provide an excellent pin-compatible migration path for legacy 18-pin PIC MCUs still used in many designs today.

In a May 2009 IEEE Spectrum article, the PIC16C84 was recognized as one of the "25 Microchips That Shook the World."* The PIC16(L)F1826/7 MCUs are a natural extension of this enduring legacy. With Microchip's Enhanced Mid-range architecture, the MCUs provide a 50% increase in performance and 14 new instructions that make programming with the C language more efficient, resulting in up to 40% better code efficiency over previous-generation 8-bit PIC MCUs. In addition to the mTouch capacitive touch-sensing module and dual I^2C/SPI interfaces, peripheral enhancements include enhanced PWM functionality, and a Digital Signal Modulator that enables designers to customize communication interfaces, and combine many functions into a single MCU. nanoWatt XLP technology enables market-leading current consumption, improving overall energy efficiency and/or extending battery life in a broad range of applications.

"The PIC16(L)F1826/7 are a testament to Microchip's longevity and commitment to the continuous improvement of our product portfolio," said Steve Drehobl, vice president of Microchip's Security, Microcontroller and Technology Development Division. "The 32 MHz PIC16(L)F1826/7 MCUs are significantly faster than the 10 MHz PIC16C84 MCU introduced 16 years ago. Additionally, they have four times the memory space and consume an order of magnitude less current. They also maintain pin compatibility, for easy migration from all of our legacy 18-pin MCUs."

Example applications for the PIC16(L)F1826/7 MCUs include those in the consumer (e.g., laser printers, remote controls); industrial (e.g., "Green" lighting, embedded network gateways, traffic monitors, touch panels, metering); and automotive markets (e.g., LED Daytime Running Lights and taillights).

Key Features

Feature	PIC16(L)F1826/7 MCUs
Max. Frequency	32 MHz
Internal Oscillator	32 kHz/31.25 kHz to 32 MHz, Software Selectable
Program Memory	Up to 7 KB Flash
Data EEPROM	256 Bytes
SRAM	Up to 384 Bytes
Timers	Up to 4 x 8-bit, 1 x 16-bit
Communication	2 x MI2C/SPI 1 x EUSART
Analog-to-Digital Converter	12 x 10-bit
Comparators	2 x with Rail-to-Rail Inputs
PWM Channels	Up to 4
Operating Voltage	1.8 - 5.5V
Standby Current	0.030 A @1.8V, Typical
Other Capabilities	mTouch Capacitive Touch Sensing, Digital Signal Modulator

Development Tool Support

The PICkit(TM) 2 18-pin Demonstration Board (part # DM164120-4) provides a quick and easy way to evaluate and develop with the PIC16(L)F1826/7 MCUs. The board includes four LEDs, a potentiometer for an Analog-to-Digital Converter (ADC), a pushbutton, a prototyping area, a 6-pin connector for the PICkit 3 In-Circuit Debugger/Programmer (part # PG164130), as well as two bare boards for designers to use for their own project. The PICkit 2 18-pin Demonstration Board is priced at $23.99 and is expected to be updated with the PIC16F1827 MCU sample in Calendar Q1 2010.

Microchip's complete suite of standard development tools can be used with the PIC16(L)F1826/7 MCUs, including the user-friendly and free MPLAB(R) IDE, along with the selection of the HI-TECH C(R) compiler for PIC16 MCUs. The HI-TECH C 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. Additionally, there is a variety of debugging hardware, from the popular PICkit 3 In-Circuit Debugger/Programmer ($44.95), to the MPLAB ICD 3 ($219.99) In-Circuit Debugger, MPLAB PM3 Universal Device Programmer ($895.00), and MPLAB REAL ICE(TM) In-Circuit Emulator ($495.00). All of these tools can be purchased today at microchipDIRECT (http://www.microchip.com/get/40084701400463). More information on Microchip development tools is available at http://www.microchip.com/get/400847034375.

Device Packaging & Pricing

The PIC16(L)F1826/7 devices are both available in 18-pin PDIP and SOIC packages; a 20-pin SSOP package; and 28-pin 6 mm x 6 mm QFN and 4 mm x 4 mm QFN packages. The PIC16(L)F1826 are priced at $0.92 each in 10,000-unit quantities, and the PIC16(L)F1827 at $0.99 each in 10,000-unit quantities, for all package options. Samples are available today, at http://www.microchip.com/get/400854761805556. Volume-production quantities can be ordered today, at microchipDIRECT (http://www.microchip.com/get/40084701400463). For further information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip's Web site at http://www.microchip.com/get/400846900115741.

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/get/400847053240741.

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*Source: IEEE Spectrum, "25 Microchips That Shook the World," by Brian R. Santo, pgs. 34-36, May 2009.

Photos and Block Diagram available through editorial contact or Flickr (feel free to publish):

MCU Photo

http://www.microchip.com/get/40135645

Block Diagram

http://www.microchip.com/get/401356440740741

Eval. Board Photo

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