WORLD’S FIRST 8-BIT OTP MICROCONTROLLER
WITH ON-CHIP VOLTAGE REGULATOR, HIGH-VOLTAGE I/O
DEBUTS

CHANDLER, Ariz., Nov. 30, 1998 [NASDAQ: MCHP] -- Microchip Technology Inc. today introduced the world’s first 8-bit one-time-programmable (OTP) microcontroller with an on-chip regulator and high-voltage I/O, substantially reducing overall system cost and power requirements. With the new PIC16HV540, Microchip expands its popular PICmicro® 8-bit RISC microcontroller architecture as an ideal solution for high-voltage system applications, including thousands of appliances and other products powered by 9-volt and 12-volt batteries.

The PIC16HV540 has eight high-voltage I/O ports whose inputs will accept voltages of up to 15 volts and can drive outputs rail to rail up to 15 volts to interface directly with sensors and relays, for example. With a 3-volt and a 5-volt on-chip voltage regulator, the PIC16HV540 eliminates the need for expensive low-current regulators in many applications powered from 9-volt or 12-volt batteries or unregulated 6-volt, 9-volt or 12-volt AC adapters.

A brownout detect, power-on reset and device reset timer eliminates the need for external circuitry for further cost reduction. Four on-chip oscillator configurations include a low-cost RC oscillator; standard crystal/resonator; and power saving, low frequency crystal. A separate RC oscillator is used for the sleep timer and the programmable watchdog timer for reliable operation.

- MORE -
ADD ONE – WORLD'S FIRST HIGH-VOLTAGE OTP MCU

The device is ideally suited for applications requiring very low standby current at high voltages: appliances, toys, games, security systems, remote-keyless entry and automotive modules. Given its low cost, low power, ease of use and I/O flexibility, the PIC16HV540 can be a versatile solution for applications not presently using a microcontroller, including timer functions, replacement of ‘glue’ logic in larger systems and coprocessor applications.

The PIC16HV540 contains 512 x 12 words of OTP on-chip EPROM program memory and 25 x 8 bytes of user data RAM. The device features 33 single-word instructions, single cycle (200 nanoseconds) operation at 20 MHz, a deeper four-level hardware stack, brown-out protection, wide 3.5-13.5 operating voltage, 8 high-voltage I/O pins, 4 regulated I/O pins, programmable code protection, 8-bit real time clock/counter with 8-bit programmable prescaler, wake-up from SLEEP timer and wake-up from SLEEP on pin change.

Microchip PICmicro devices are supported by the MPLAB®-ICE Universal In-Circuit Emulator. This high-performance real-time in-circuit emulator features the sophisticated MPLAB Integrated Development Environment (IDE) and interchangeable processor modules allow the system to be easily configured to emulate different processors. MPLAB-ICE emulates voltages as low as 2.0 V and can emulate at full speed. Operating in the Microsoft Windows® environment, MPLAB IDE gives users the flexibility to edit, compile and emulate all from a single user interface—at no additional cost. Low-cost PICmicro microcontroller development is provided by PICSTART® Plus, the MPLAB development software suite and a programmer supported by assembler and simulator software tools. Other support and development tools include fuzzy logic tools, programming support and a software simulator. Support for the PIC16HV540 will be added in 1999.

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ADD TWO – WORLD'S FIRST HIGH-VOLTAGE OTP MCU

Available in 18-pin PDIP, SOIC, SSOP and windowed CERDIP packages, pricing for the PIC16HV540 is $1.34 each in 1,000-unit quantities. Samples and volume production will be available first quarter 1999. For more information, contact any Microchip sales representative or authorized worldwide distributor.

Microchip Technology Inc. manufactures the PICmicro® family of 8-bit RISC-based microcontrollers—with OTP, Enhanced FLASH, EEPROM and ROM memory technologies; serial EEPROMs and related specialty memory products; and KEELOQ® code hopping devices. These products target thousands of embedded control applications in the consumer, automotive, office automation, communications and industrial markets. Microchip’s quality systems are ISO 9001 certified. Headquartered near Phoenix in Chandler, Ariz., Microchip employs approximately 2,200 people worldwide and has sales offices throughout Asia, Europe, Japan and the Americas.

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