# Thirty-two Bit Microcontroller Line Plus Integrated Development Environment

Microchip Technology introduced its PIC32 family of 32-bit microcontrollers (MCUs). The PIC32 family adds more performance and more memory while maintaining pin, peripheral and software compatibility with Microchip's 16-bit MCU/DSC families, and it is fully supported by the MPLAB Integrated Development Environment (IDE) which supports the company's complete portfolio of 8-, 16- and 32-bit devices. Launching with seven general-purpose members, the PIC32 family operates at up to 72 MHz and offers ample code- and data-space capabilities with up to 512 KB Flash and 32 KB RAM. The PIC32 family also includes a variety of communication peripherals, a 16-bit Parallel Master Port supporting additional memory and displays, as well as a single-supply on-chip voltage regulator. The family is based on the industry-standard MIPS32 architecture, with its combination of performance, low power consumption, fast interrupt response and extensive industry tool support. The MIPS32 M4K core can achieve 1.5 DMIPS/MHz operation, due to its efficient instruction-set architecture, five-stage pipeline, hardware multiply/accumulate unit and up to eight sets of 32 core registers. To reduce system cost, the MCUs support MIPS16e 16 bit ISA -- enabling code-size reductions of up to 40 percent, according to the company. All PIC32 products are supported by the MPLAB IDE, the MPLAB C32 C compiler, the MPLAB REAL ICE emulation system, the MPLAB ICD 2 in-circuit debugger and the Explorer 16 development board.

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