

General-Purpose 8-bit MCUs Include Next-Generation Digital and Analog Peripherals



Microchip Technology Inc. announced a new family of 8-bit microcontrollers (MCUs) featuring next-generation analog and digital peripherals, making them desirable for general-purpose applications, as well as battery charging, LED lighting, ballast-control, power-conversion and system-control applications. The PIC12F(HV)752 MCUs feature an integrated complementary output generator (COG) peripheral that provides non-overlapping, complementary waveforms for inputs such as comparators and pulse width modulation (PWM) peripherals, while enabling dead-band control, auto shutdown, auto reset, phase control and blanking control. Additionally, the new MCUs feature 1.75 KB of self read-write program memory, 64B of RAM, an on-chip 10-bit ADC, capture-compare PWM modules, high-performance comparators (down to 40 ns response), and two 50 mA-capable I/O's.

Engineers are constantly challenged to increase system performance and efficiency while reducing system costs, especially for newer LED-lighting and battery-charging applications. With their numerous on-chip, general-purpose and specialized peripherals, including the integrated COG, high performance comparators, 50 mA outputs for direct FET drive, the PIC12F(HV)752 MCUs meet these needs. The high-voltage variant in the family—the PIC12HV752 MCU—incorporates a shunt regulator that allows operation from 2V to an unspecified user-defined maximum voltage level, with less than 2 mA operation current. This high-voltage variant is ideal for cost-sensitive applications with high-voltage power rails. Additionally, the 4-channel, 10-bit ADC can be used to implement various sensors and mTouch™ sensing applications, including capacitive touch.

The PIC12F(HV)752 MCUs are supported by Microchip's standard suite of world-class development tools, including the MPLAB Integrated Development Environment (IDE), and the PICkit 3 (part # PG164130, \$44.95), MPLAB REAL ICE™ (part # DV244005, \$499.98), and MPLAB ICD 3 (part # DV164035, \$189.99) debuggers/programmers. Engineers can also use Microchip's HI-TECH C Compiler for PIC10/12/16 MCUs (part #s SW500010 and SW500005).

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