SPI real-time clock/calendars series expands with 10-pin packages

Microchip Technology Inc. announced the expansion of its stand-alone Real-Time Clock/Calendar (RTCC) portfolio with the new 10-pin, SPI MCP795XX family. These devices offer many of the same features as the larger 14-pin MCP795WXX family, including exceptional timekeeping performance. Reducing overall component count in the system and eliminating the user programming costs for a serial ID make the MCP795XX RTCC family appropriate for the handheld, wireless and consumer markets. By including 64 bytes of SRAM, 2 Kbits of EEPROM and a 128-bit Unique ID, which can be ordered blank or preprogrammed with a MAC address, extra memory devices may not be needed. Utility power meters, manufacturing equipment, radios, GPS and hospital instrumentation applications that need accurate time over a broad temperature range will also benefit from the very wide digital trimming range, which can compensate up to 22 seconds per day for crystal frequency drift. Digital trimming improves the timekeeping accuracy of RTCCs, and a wide digital trimming range provides customers with high accuracy over a large temperature range. Accurate timekeeping is also supported at a decreased power-consumption level, because digital trimming is maintained when the MCP795XX is operating from backup power on the VBAT input. These devices join a portfolio that distinctively offers a battery-backed RTCC with both power-fail and power-restore timestamps plus three types of non-volatile memory: EEPROM, SRAM and a Unique ID. When the time and duration of power failures need to be logged, the MCP795XX family can accomplish this without adding any circuitry by using the on-chip power-fail timestamp feature, which is not offered by any other SPI RTCC on the market. With long battery life at a premium, applications such as wireless, portable communications, security and automotive can benefit from the 5 MHz SPI bus and millisecond alarm. This high-resolution alarm output provides a greater degree of control over the duty cycle needed to support longer MCU sleep and power-down modes.

Microchip Technology Inc.

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