RTC extends battery life of tiny wearables

Susan Nordyk - March 31, 2018

According to EM Microelectronic, its EM3028 real-time clock module offers 50% extended battery life and double the accuracy of comparable devices. Factory calibrated to within ±1 ppm at 25°C, the clock module provides accurate sleep and wake-up timing for connected devices, such as wearables, portables, IoT, metering, health care, and industrial.

The EM3028 integrates a real-time clock IC and 32 kHz crystal in a 3.2×1.5×0.8-mm hermetically sealed ceramic package with a metal lid. Also housed within the module are 43 bytes of nonvolatile user memory and 2 bytes of RAM, as well as an I²C bus interface. The device has a supply voltage range of 1.2 V to 5.5 V and operates over a temperature range of -40°C to +85°C.

The high accuracy and long-term stability of the EM3028 guarantee consistent performance throughout the part’s lifetime without the need to calibrate during manufacturing. Its ±1 ppm timing accuracy results in 30 second precision over 1 year, while consuming just 40 nA at 3 V. An internal backup switch allows waking up a sleeping device even years after it has been switched off for power saving purposes.

EM Microelectronic products are sold worldwide through its distributor network.

EM3028 product page

EM Microelectronic, www.emmicroelectronic.com

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