What New Can You Do with the MSP430FR6972 MCU?



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The MSP430FR6972 FRAM microcontroller and derivatives released last weekoffer the perfect balance between analog integration and ultra-low power with a 116-segment LCD controller, a 12-bit ADC with internal window comparator andan AES hardware accelerator. This device comes in with a score at just under 120 on the ULPBench benchmark due to unmatched standby current, ultra-low active current, low-power peripherals and the unique write advantages of FRAM.



This low-power and integration, combined with the speeds and endurance of FRAM, is perfect for a number of applications that require the acquisition and manipulation of sensor data. Here is an example and a reference design to get you thinking!

The world is filled with motors. Some of these motors feature integrated circuitry to monitor their condition and report any issues, but many of them do not. This leads tothe needforhand-held meters to verify the stability of equipment, but this can cost lots of money! This is the problemKilby Labs, Tl's center for innovation, set out to address.Leveraging the MSP430FR5969 microcontroller (MCU) and a vibration sensor, a system can be created to collect data and send it to a central hub by leveraging the SimpleLink multi-standardCC2650wireless MCU.Thisdata can be used to determine vibration frequency and to determine if a Motor starts deviating from its standard operation. In addition, using the MSP-IQMATHLIB library, more complex processing, such as FFT calculations, could also be implemented on the MCU itself to further minimize the need to send data and to enable the system to run for decades on a single coin cell battery!

Watch the short video below and downloadthe complete TI Design, TIDM-WLMOTORMONITOR, today!

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