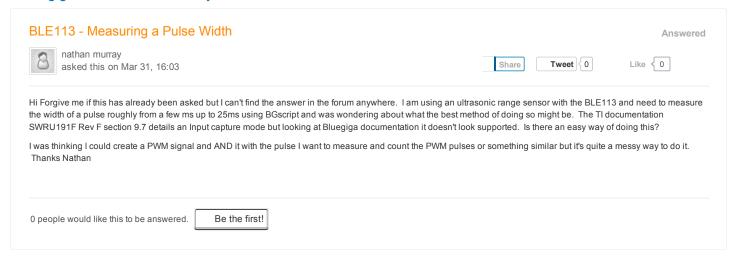
Bluegiga Forums / Community Forums / Bluetooth Smart



Comments



Jeff Rowberg
Bluegiga

Hello Nathan,

Answer

At this time, there is no way to use hardware timer functionality for measuring incoming signals like this at a hardware level. There are no API methods that provide access to incoming counter data based on input capture mode signals. The only way "kludge" workaround would be to use an I/O interrupt, but due to the execution overhead of BGAPI/BGScript, the maximum resolution you could get with this is on the order of many milliseconds between each pulse.

Doing this would require the BLE C SDK (full IAR 8051 license required) for direct hardware register access, or an external microcontroller.

March 31, 2015, 22:17



Hi Jeff thanks for your response. In that case as I need as low cost solution as possible I think I will implement an RC circuit to convert the pulsed signal to a variable voltage, do something clever with the analog_comparator_status event and perform an ADC read, it's only a single pulse I need to measure not a succession of pulses, it might need some careful calculations and trialing but hopefully it will work.

April 1, 2015, 10:50 nathan murray



It works really well if anyone wants to do something similar, on the positive pulse I start charging a capacitor through a resistor, on the negative pulse I perform an ADC read via an IRQ, you have to make sure your RC time constant is much longer than the maximum pulse width to ensure the capacitor charging is always quite linear when doing the ADC read on the negative edge.

nathan murray

April 2, 2015, 01:05

