

## HW07: GPIO Speed

Below is a table of the delay time and CPU percentage (retrieved via **htop**) while the implementation was running on a 1 kHz square wave.

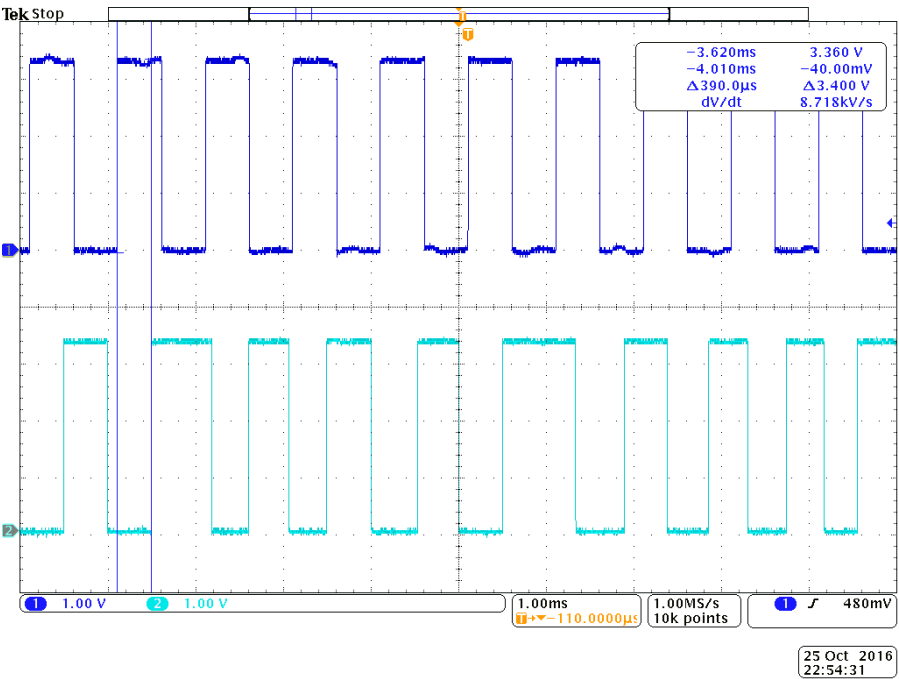
Implementation	Delay Time	CPU Percentage
JavaScript using bonescript	390 $\mu$ s*	99.5%
C using mmap	24 $\mu$ s	100%
Kernel Module	308 $\mu$ s**	5.7%
PRU	36 ns	4.2%

\* There was a lot of jitter in the JavaScript delay time. This is one of the delay times measured.

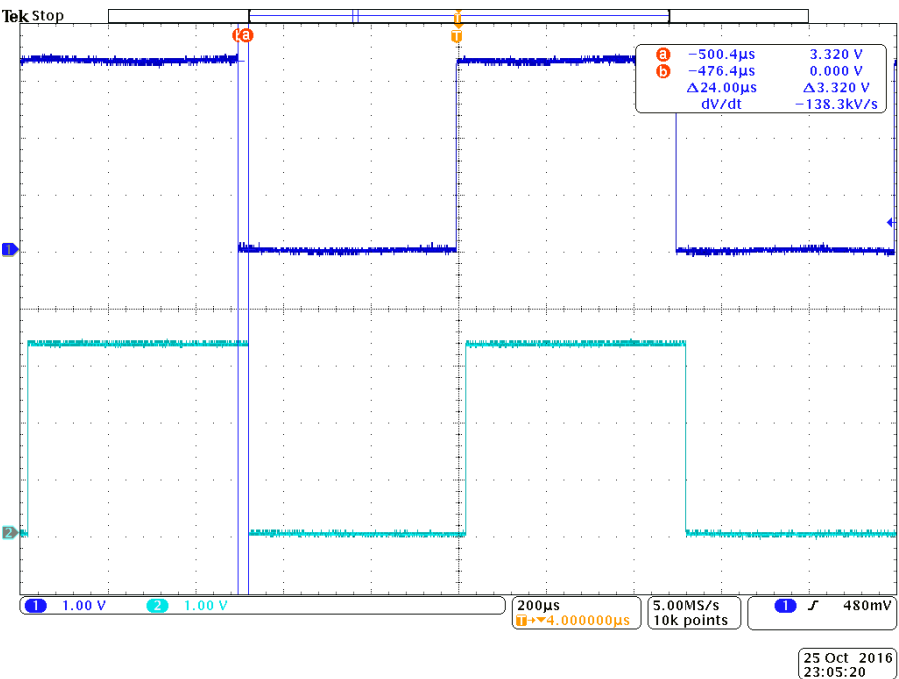
\*\* The delay time for the kernel module had to be measured at 600 Hz, because at even 1 kHz it would miss changes because it was too jittery.

Included on the following pages are oscilloscope screenshots of each of the implementations.

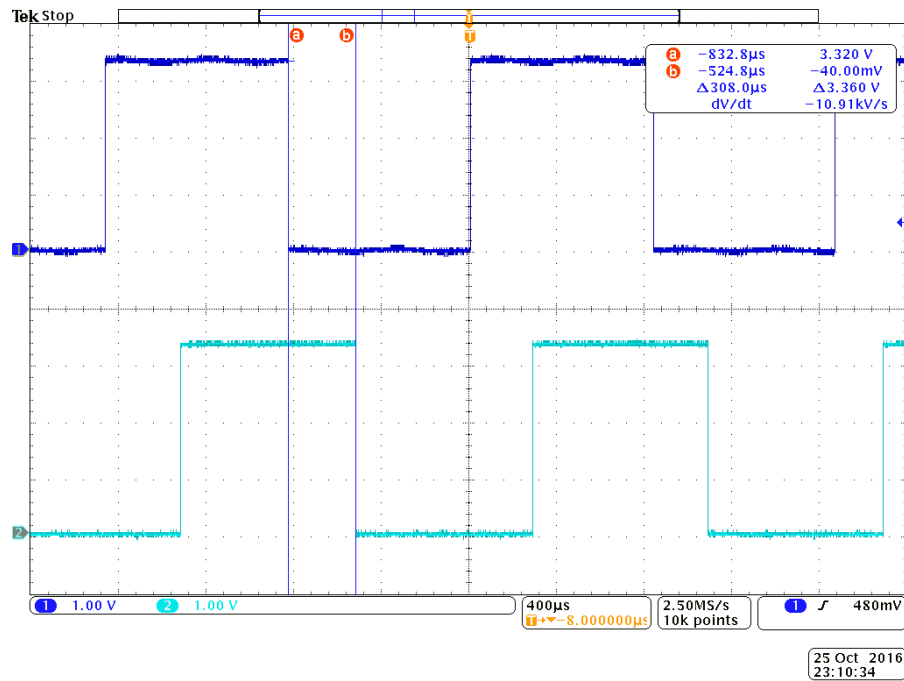
JavaScript



C



## Kernel Module



## PRU

