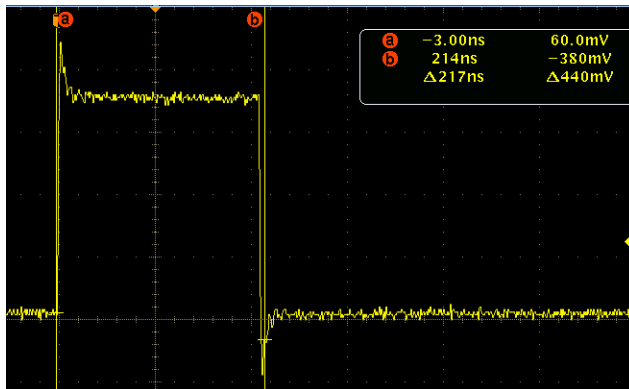


# GPIO Toggle: Bench measurements

## ARM GPIO Toggles at 200ns

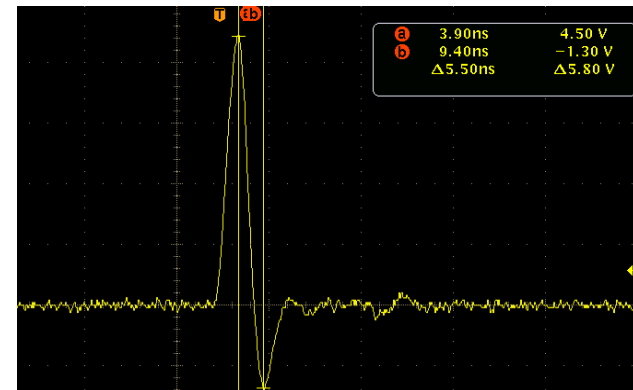
```
int main(){  
    // Configure GPIO module, pinmuxing, etc.  
  
    // Toggle system-level GPIO 3.19 from ARM core  
    BitToggle(GPIO_INSTANCE_ADDRESS+GPIO_SETDATAOUT,  
              GPIO_INSTANCE_ADDRESS+GPIO_CLEARDATAOUT);  
  
    while();  
}  
  
unsigned long BitToggle(unsigned long val1, unsigned long val2){  
    asm(  
        " mov r2, #0x00080000" "\n\t"  
        "str  r2,[r0]" "\n\t"           // Set GPIO 3.19  
        "str  r2,[r1]" "\n\t"           // Clear GPIO 3.19  
    );  
    return val1;  
}
```



~200ns

## PRU IO Toggles at 5ns:

```
.origin 0  
.entrypoint PRU_GPIO_TOGGLE  
  
PRU_GPIO_TOGGLE:  
  
    // Set PRU GPO 5  
    SET      R30, R30, 5  
  
    // Clear PRU GPO 5  
    CLR      R30, R30, 5  
  
    HALT
```



~5ns = ~40x Faster

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