

Example code to use the PIT timer

```
#include "MKL25Z4.h"

void Init_PIT(uint32_t period) {
    // Enable clock to PIT module
    SIM->SCGC6 |= SIM_SCGC6_PIT_MASK;

    // Enable module, freeze timers in debug mode
    PIT->MCR &= ~PIT_MCR_MDIS_MASK;
    PIT->MCR |= PIT_MCR_FRZ_MASK;

    // Initialize PIT0 to count down from argument
    PIT->CHANNEL[0].LDVAL = PIT_LDVAL_TSV(period);

    // No chaining
    PIT->CHANNEL[0].TCTRL &= PIT_TCTRL_CHN_MASK;

    // Generate interrupts
    PIT->CHANNEL[0].TCTRL |= PIT_TCTRL_TIE_MASK;

    /* Enable Interrupts */
    NVIC_SetPriority(PIT_IRQn, 128); // 0, 64, 128 or 192
    NVIC_ClearPendingIRQ(PIT_IRQn);
    NVIC_EnableIRQ(PIT_IRQn);
}

void Start_PIT(void) {
    // Enable counter
    PIT->CHANNEL[0].TCTRL |= PIT_TCTRL_TEN_MASK;
}

void Stop_PIT(void) {
    // Enable counter
    PIT->CHANNEL[0].TCTRL &= ~PIT_TCTRL_TEN_MASK;
}

void PIT_IRQHandler() {
    //clear pending IRQ
    NVIC_ClearPendingIRQ(PIT_IRQn);

    // check to see which channel triggered interrupt
    if (PIT->CHANNEL[0].TFLG & PIT_TFLG_TIF_MASK) {
        // clear status flag for timer channel 0
        PIT->CHANNEL[0].TFLG &= PIT_TFLG_TIF_MASK;

        // Do ISR work
        // your code goes here

    } else if (PIT->CHANNEL[1].TFLG & PIT_TFLG_TIF_MASK) {
        // clear status flag for timer channel 1
        PIT->CHANNEL[1].TFLG &= PIT_TFLG_TIF_MASK;
    }
}
```