

Dept. of Computer Science and Engineering

EECS3215 – Embedded Systems

Introduction to FRDM KL43Z

Lab 3

Objectives:

The objective of this lab is to get familiar with the FRDM KL43Z board and the MCUXpresso SDK.

Prelab

Watch the 2 videos on the course web page and read the board user manual and quick start guide. Also refer to the lecture slides regarding FRDM KL43Z board.

LAB

Write, compile, and download a program to blink the green LED every second. The delay is usually implemented by a loop like this

```
for(i=0; i<N; i++) count++;
```

1. That loop will be translated into assembly and executed N times. Depending on the compiler, the assembly code is probably between 5-10 statements, if the loop is, say, x statements, then the delay equal to xN/t_c , where t_c is the cycle time. The first thing to do is to find x. Choose a suitable value for x and run the loop and measure the delay using a scope to find x.
2. After finding x, write the code to blink the LED every second (one second ON and one second off).
3. Write another program to toggle the 2 LEDs one per second

Deliverables

Demo the program to the TA, there is no lab report for this lab