Date : 13/ 11/ 2013

Pulse Width Modulation (PWM)

CONTENT

1. Overview
2. Code
3. Notes
4. Test
5. **Overview**

PIC18F4550 device has two CCP (Capture/Compare/PWM) modules. PWM signals have a specific duty cycle for logic HIGH. We can increase or decrease the duty cycle Percent(%) as desired.

1. **Code**

Duty cycle can be changed by choosing a desired value in between 0 and 1023 (0 - 210). In this example code, two PWM modules are configured and generating two different output signals. The Duty cycle is assigned with an initial value 0 for PWM1 and 255 for other. Duty cycle for PWM1 is incrementing while for PWM2 it is decrementing within a loop.

1. **Notes:**

10-bit resolution is available for PWM duty cycle. Therefore 0 and 1023 (0 - 210) steps can be implemented.

Pins RC1 and RC2 are multiplexed for PWM modules 2 and 1 respectively.

1. **Test**

PWM period and initial duty cycle are written in the code.

**Input:** No runtime input parameters required.

**Output:** Output tested using two LDEs connected to both the modules. The brightness of the LEDs will increase and decrease according to the change in duty cycle.