

```

1  // Clock Library
2  // Jason Losh
3
4  //-----
5  // Hardware Target
6  //-----
7
8  // Target Platform: EK-TM4C123GXL
9  // Target uC:      TM4C123GH6PM
10 // System Clock:   -
11
12 // Hardware configuration:
13 // 16 MHz external crystal oscillator
14
15 //-----
16 // Device includes, defines, and assembler directives
17 //-----
18
19 #include <stdint.h>
20 #include "clock.h"
21 #include "tm4c123gh6pm.h"
22
23 //-----
24 // Global variables
25 //-----
26
27 //-----
28 // Subroutines
29 //-----
30
31 // Initialize system clock to 40 MHz using PLL and 16 MHz crystal oscillator
32 void initSystemClockTo40Mhz(void)
33 {
34     // Configure HW to work with 16 MHz XTAL, PLL enabled, sysdivider of 5, creating
35     // system clock of 40 MHz
36     SYSCTL_RCC_R = SYSCTL_RCC_XTAL_16MHZ | SYSCTL_RCC_OSCSRC_MAIN |
37     SYSCTL_RCC_USESYSDIV | (4 << SYSCTL_RCC_SYSDIV_S);
38 }
39

```