2018.05.11.Fri - ServoMotor(ETPWM)

노트북:	SW		
만든 날짜:	2018-05-11 오후 1:17	**수정한 날짜:**	2018-05-11 오후 4:45
작성자:	정상요		

모터를 돌리기 위하여!!!
주기 : 20ms
주파수 : 50Hz
-> PLL이 개입을 하여야 한다. GCM(Global Clock Module)

패리패럴은 항상
N2HET

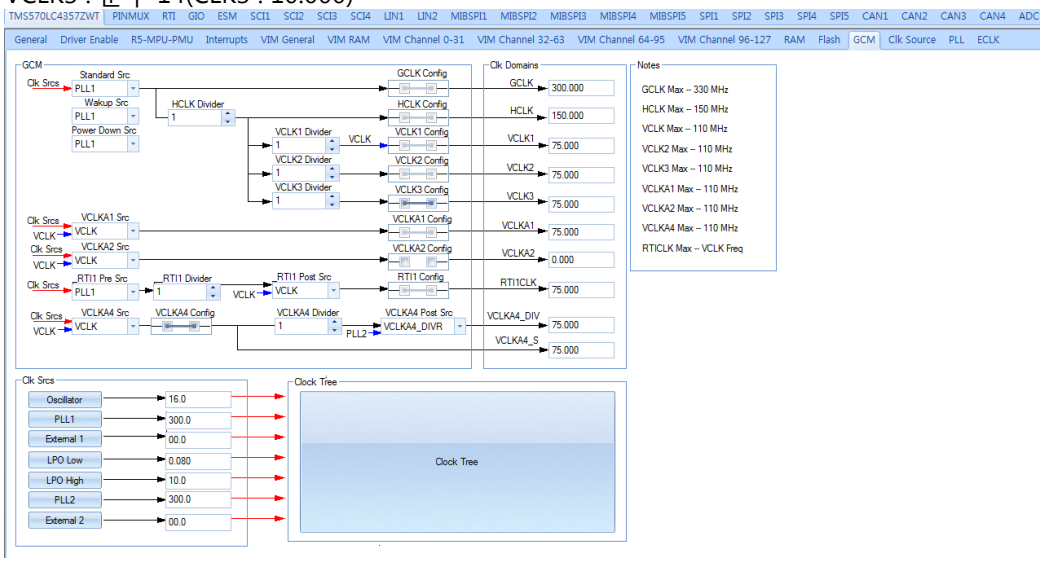
HET(High-End Timer) : FPGA내부에 존재(성능이 좋음)
ETPWM : CPU내부에 존재(보다 성능이 떨어지지만, 다루기가 편함)

오전

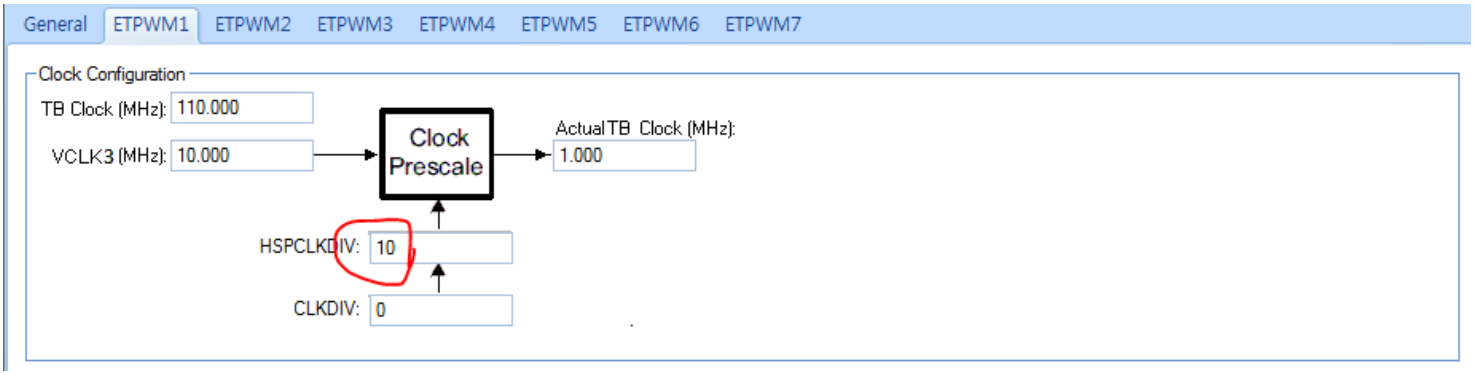
소스코드 분석
HET -> duty조절
`etpwmInit();`
`etpwmStartTBCLK();`

오후

실제 동작구현
HCG에서 설정방법 - ETPWM
Driver Enable
Enable GIO driver
Enable ETPWM driver
GCM
VCLK3 : 분주 14(CLK3 : 10.000)



ETPWM
General : Enable ETPWM1 만 set
ETPWM1 : Duty & Period 조절



-> Generate Code(F5)

CCS에서 코드작성

```
#include "HL_sys_common.h"
#include "HL_system.h"
#include "HL_etpwm.h"
/* USER CODE BEGIN (1) */
uint32 value = 0;
uint32 idx = 0;
uint32 duty_arr[6] = {1000, 1200, 1400, 1600, 1800, 2000};
/* USER CODE END */
/** @fn void main(void)
*   @brief Application main function
*   @note This function is empty by default.
*
*   This function is called after startup.
*   The user can use this function to implement the application.
*/
/* USER CODE BEGIN (2) */
void pwmSet(void);
void delay(uint32);
/* USER CODE END */
int main(void)
{
/* USER CODE BEGIN (3) */
    etpwmInit();
    etpwmStartTBCLK();
    delay(50000000000);
    for(;;)
    {
        pwmSet();
        delay(10000000)
    }
/* USER CODE END */
    return 0;
}
/* USER CODE BEGIN (4) */
void pwmSet(void)
{
    value = duty_arr[idx % 6];
    etpwmSetCmpA(etpwmREG1, value);
    idx++;
}
void delay(uint32 delay)
{
    int i;
    for(i = 0; i < delay; i++);
}
/* USER CODE END */
```