

- 날짜 : 2014년 1월 16일
- 제목 : **Microchip Code Configurator** 예제
- 문서번호 : KR_ES_0189
- 작성자 : 하삼식 (Vincent.ha@microchip.com , FAE)

< Engineering Issue 내용 >

1. 관련 Devices :

- PIC12(L)F1501 PIC16(L)F1787
- PIC12(L)F1822 PIC16(L)F1788
- PIC12(L)F1840 PIC16(L)F1789
- PIC16(L)F1503 PIC16(L)F1823
- PIC16(L)F1507 PIC16(L)F1824
- PIC16(L)F1508 PIC16(L)F1825
- PIC16(L)F1509 PIC16(L)F1826
- PIC16(L)F1512 PIC16(L)F1827
- PIC16(L)F1513 PIC16(L)F1828
- PIC16(L)F1516 PIC16(L)F1829
- PIC16(L)F1517 PIC16(L)F1847
- PIC16(L)F1518 PIC16(L)F1933
- PIC16(L)F1519 PIC16(L)F1934
- PIC16(L)F1526 PIC16(L)F1936
- PIC16(L)F1527 PIC16(L)F1937
- PIC16(L)F1782 PIC16(L)F1938
- PIC16(L)F1783 PIC16(L)F1939
- PIC16(L)F1784 PIC16(L)F1946
- PIC16(L)F1786 PIC16(L)F1947

2. 내용

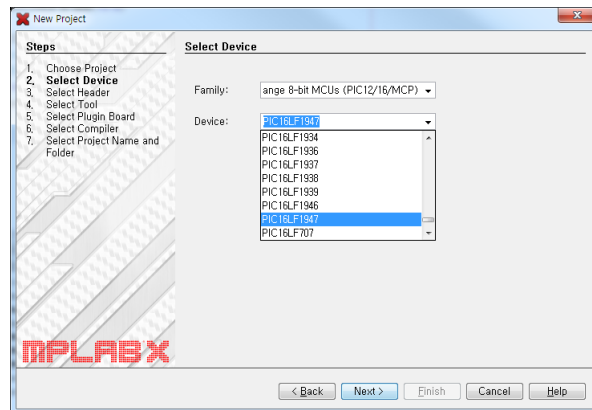
- MC2(Microchip Code Configurator)를 이용해 UART로 ADC를 값을 출력하는 예제

3. 준비 사항

- PICDEM PIC18 Board
- PIC18F1947 PIM
- USB to Serial Cable

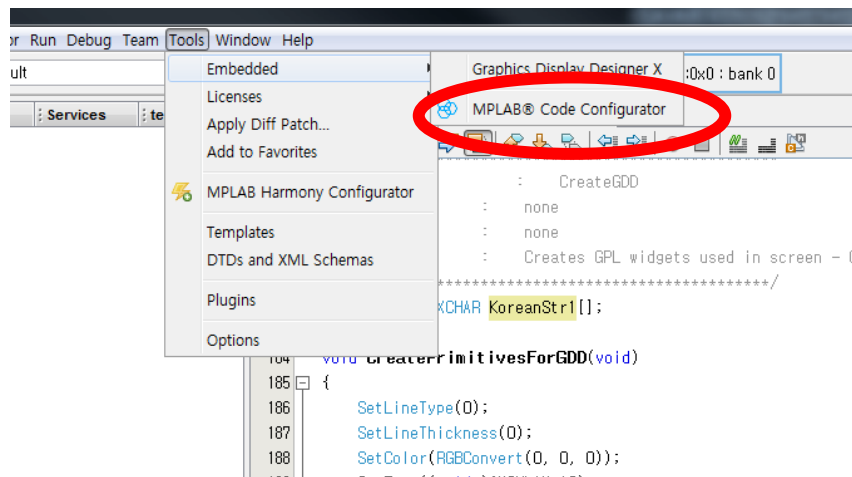
4. 사용방법

- 1) PIC16LF1947을 선택하고 Project를 만든다.



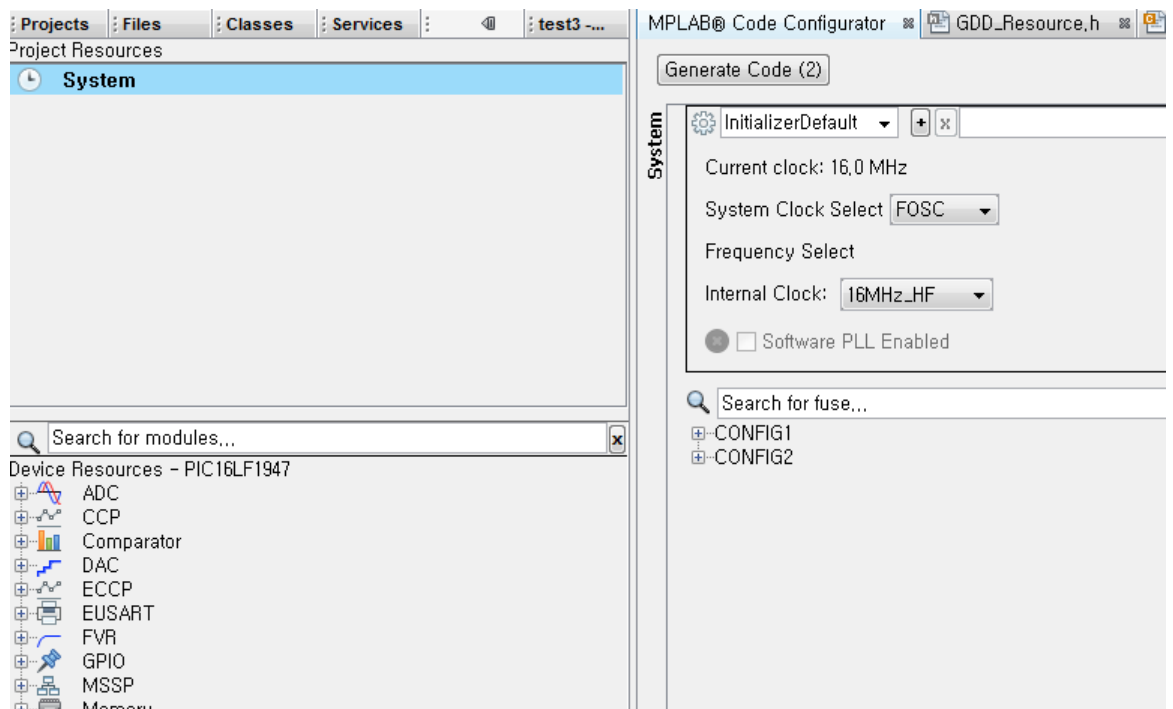
A.

- 2) MC2를 실행합니다.



A.

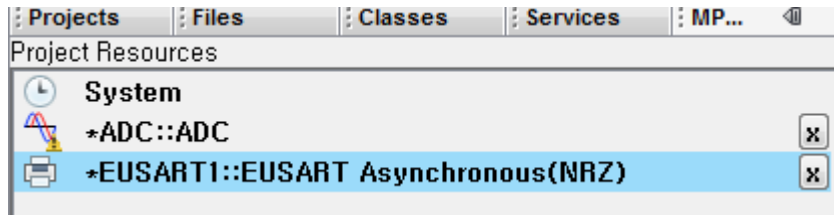
- 3) Clock을 먼저 설정한다.



A.

B. Internal Clock 16Mhz

4) Project Resources에 ADC와 UART를 추가한다.



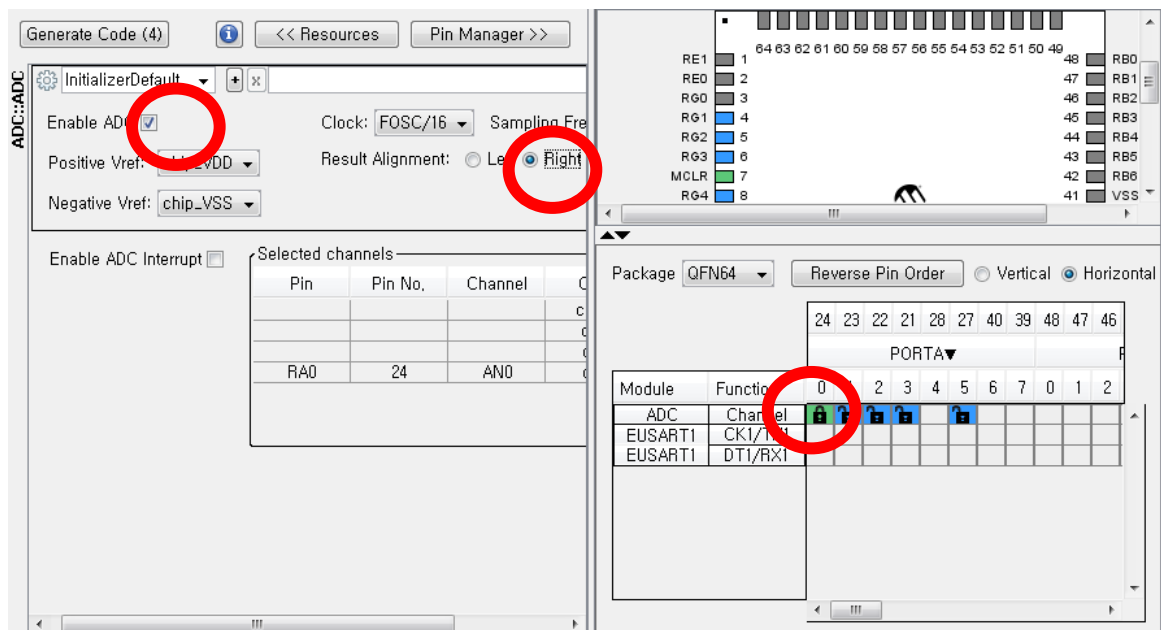
A.

5) ADC를 설정

A. Enable ADC 체크

B. 오른쪽 정렬로 선택

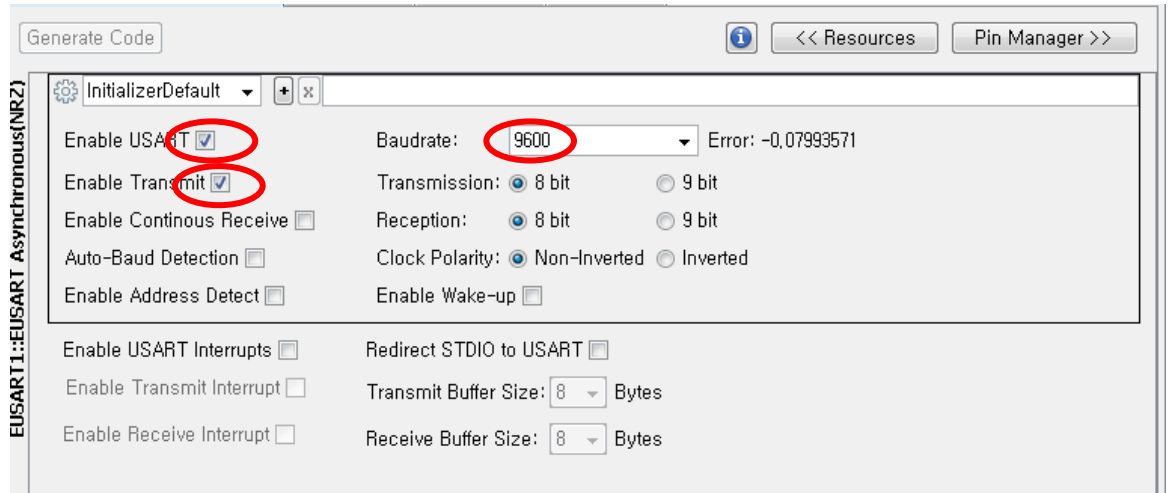
C. RA0를 AD포트로 선택한다.



D.

6) UART설정

- A. Enable USART 체크
- B. Enable Transmit 체크
- C. Boadrate 입력(9600bps)



Generate Code << Resources Pin Manager >>

InitializerDefault

EUSART1::EUSART Asynchronous(NRZ)

Enable USART ☒ Baudrate: 9600 Error: -0.07993571

Enable Transmit ☒ Transmission: ☒ 8 bit ☐ 9 bit

Enable Continuous Receive ☐ Reception: ☒ 8 bit ☐ 9 bit

Auto-Baud Detection ☐ Clock Polarity: ☒ Non-Inverted ☐ Inverted

Enable Address Detect ☐ Enable Wake-up ☐

Enable USART Interrupts ☐ Redirect STDIO to USART ☐

Enable Transmit Interrupt ☐ Transmit Buffer Size: 8 Bytes

Enable Receive Interrupt ☐ Receive Buffer Size: 8 Bytes

D.

7) main.c파일에 Code추가

- A. #include <stdio.h>를 추가
- B. 아래 코드를 추가한다.(printf문을 이용하여 string출력을 위해)

```
adc_result_t res;
void putch(char c) {
    EUSART1_PutByte(c);
i. }
```

- C. UART로 데이터를 보내는 코드를 추가한다

```
while (1)
{
    res = ADC_GetConversion(channel_ANO);
    printf("The pot value is : %x \r\n", res);
i. }
```

- D. 최종 코드 추가된 main.c

i.

A.

