

Internal Oscillator

External Oscillator

## External Oscillator Mode

- External Oscillator Off
- External CMOS
- External CMOS / 2
- RC Oscillator / 2
- Capacitor Oscillator / 2
- Crystal Oscillator
- Crystal Oscillator / 2

## SYSCLK Source

- Use External Oscillator as SYSCLK

Clock Speed  Hz

## Frequency Control Bits

- $f \leq 32\text{kHz}$
- $32\text{kHz} < f \leq 84\text{kHz}$
- $84\text{kHz} < f \leq 225\text{kHz}$
- $225\text{kHz} < f \leq 590\text{kHz}$
- $590\text{kHz} < f \leq 1.5\text{MHz}$
- $1.5\text{MHz} < f \leq 4\text{MHz}$
- $4\text{MHz} < f \leq 10\text{MHz}$
- $10\text{MHz} < f \leq 30\text{MHz}$

## External Oscillator Frequency

 Hz

```
OSCXCN = 0x67;  
for (i = 0; i < 3000; i++); // Wait 1ms for initialization  
while ((OSCXCN & 0x80) == 0);  
CLKSEL = 0x01;  
OSCCN = 0x83;
```

OK

Cancel

Reset

Timer 0 | Timer 1 | **Timer 2** | Timer 3 | Timer 4

Timer Mode

- Auto-Reload Mode
- Capture Mode

Timer Function

- Timer Function
- Counter Function

Clock Sources

- SYSCLK / 12
- SYSCLK
- External Oscillator / 8
- SYSCLK / 2

External Pin

- Enable T2EX Transitions
  - Count up/down depending on T2EX state
  - Make toggle output available at assigned port pin

Configure T2EX

Timer Interrupt

Timer 2 Interrupt is Enabled

Configure Timer Interrupts

Timer Enable

- Enable Timer

100 Hz Change Square Wave

Timer Initial Value (Hex)

TMR2H: 00      TMR2L: 00

Timer Reload Value (Hex)

RCAP2H: 3C      RCAP2L: B0

Baud Rate for UART0

12 bps Change Baud Rate

```

SFRPAGE = TIMER01_PAGE;
TMOD    = 0x02;
CKCON   = 0x08;
TLO     = 0x0B;
TH0     = 0xFF;
SFRPAGE = TMR2_PAGE;

```

```
//-----  
// Timer2 Interrupt  
//-----  
void Timer2ISR (void) interrupt 5  
{  
  
    if(TF2)                // TF2 = TimerFlag von Timer2  
    {  
  
        // CAN Nachricht senden  
        //   CAN_send(1,n,n,n,n);  
  
        // Testpin  
        TEST_OUT = ~TEST_OUT;        // Toggle test pin  
  
        // TimerFlag zurücksetzen  
        TF2=0;  
  
    }  
}
```



**Channel A Meters**

Chan A	Mean	1895 V
Chan A	True RMS	2314 V
Chan A	Frequency	110 Hz

Configure

**TimeBase T/Div**

OverSample

**Trigger**

Auto  
ChA  
ChB  
Ext

+ve  
-ve

Trig

**Volts/Div**

X10

AC DC

Gnd

**Output**

OUT

Ch A Ch B

Inv