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PTM PWM output说明

在 PWM (pulse width modulation, PWM) 输出模式下，可输出 Duty、Period 可调的 PWM 波形。
PWM输出是对模拟电路进行控制的一种非常有效的技术，广泛应用于测量、通信、功率控制等领域。

在 PWM 输出模式下，TM 功能引脚的功能说明如下表。

引脚名称(n为TM 编号)	功能
PTCKn	输入引脚，外部时钟输入，可作为 PTM 的时钟源
PTPn	输出引脚，根据设定输出指定 PWM 信号
PTPnB	输出引脚，PTPn的反向输出

example 说明

此范例演示了 PTM 的 PWM 模式的使用

```
#define PTM_BITS 10

#if PTM_BITS == 10
    #define COUNT_MAX 1024
#elif PTM_BITS == 16
    #define COUNT_MAX 65536
#endif

PTM_Cfg_PWM_t cfg;
if (cfg.ccrpData == 0){
    period = COUNT_MAX;
}
else{
    period = cfg.ccrpData;
}
duty = cfg.ccraData;
```

程序说明

1. config sys clock

PTM clock 来自系统时钟，因此系统时钟一定要配置正确

2. config PTM to pwm output mode

- 范例设置：clockSource(Fsys/4), outputMode = PTM_PWM_OUTPUT_PWM_ACTIVE_H, CCRA = 50, CCRP = 200
- 若系统频率为8MHz
 - Pwm 频率 = (Fsys/4)/(200) = 10Khz
 - duty = 50 / (200) = 25%

3. config output pin

4. enable PTM

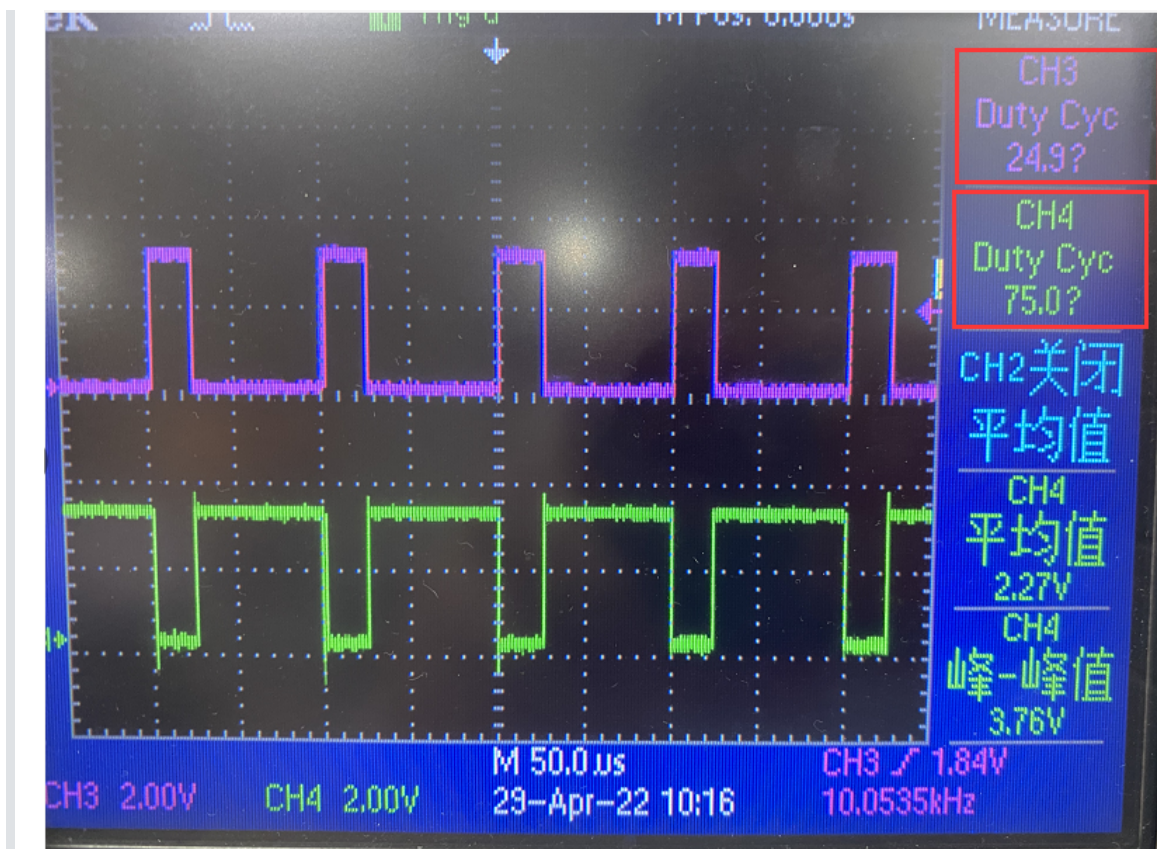
5. enable Interrupt : Non-required

根据需求设定

现象说明

连接 e-link 和目标板，将程序下载到 MCU 并运行

通过示波器测量 PTnP 或者 PTnPB 即可看到对应的输出波形



FAQ
