

3432PWM 驱动跟 3431Q 一样但是这样直接用是有问题的:

问题 1:多了一个分频,默认是 1 也就是二分频, 这个分频对 16M 以及 32K 都有效

38		0x9[31:16]	Reserved	0x0	R	保留
39		0x9[14:12]	PWM_DIV	0x0	R/W	PWM分频数: 0, 16M; 1:8M; 2:4M ..... 7:16M/2^7
40		0x9[11]	Reserved	0x0	R/W	
41		0x9[10]	PWM5_PWD	0x1	R/W	same as PWM0
42		0x9[9]	Reserved	0x0	R/W	
43		0x9[8]	PWM4_PWD	0x1	R/W	same as PWM0
44		0x9[7]	Reserved	0x0	R/W	
45		0x9[6]	PWM3_PWD	0x1	R/W	same as PWM0
46	0x00800024	0x9[5]	Reserved	0x0	R/W	
47		0x9[4]	PWM2_PWD	0x1	R/W	same as PWM0
48		0x9[3]	Reserved	0x0	R/W	
49		0x9[2]	PWM1_PWD	0x1	R/W	same as PWM0
50		0x9[1]	pwm_clk_sel	0x0	R/W	PWM工作时钟选择信号: 0: 工作时钟为32KHz 1: 工作时钟为16MHz
51		0x9[0]	PWM0_PWD	0x1	R/W	PWM工作时钟关闭信号: 0: 工作时钟打开 1: 工作时钟关闭

```
void pwm_div_set(unsigned char div)
{
    REG_AHB0_ICU_PWMCLKCON &= ~(0x0f << BIT_PWM_DIV_SEL);
    //PWM div:0-16;1-8M;2-4M;7-16M/2^7
    REG_AHB0_ICU_PWMCLKCON|=(div<<BIT_PWM_DIV_SEL);
    UART_PRINTF("PWMCLKCON 2222=%x\r\n",REG_AHB0_ICU_PWMCLKCON);
}
```

div 等于 0 表示不分频, 选择 16M

```
void pwm_init(PWM_DRV_DESC *pwm_drv_desc)
{
    if(pwm_drv_desc == NULL) ...
    if ((pwm_drv_desc->channel > PWM_CHANNEL_NUMBER_MAX) && (pwm_drv_desc->channel != 0x06) && (pwm_drv_desc->duty_cycle > pwm_drv_desc->end_value) ...
    // enable GPIO second function
    if ((pwm_drv_desc->mode & 0x0C) != 0x04) ...
    //Config clk
    ICU_PWM_CLK_PWM_X_PWD_CLEAR(pwm_drv_desc->channel);
    if (pwm_drv_desc->mode & 0x10)
    {
        pwm_div_set(0);
        ICU_PWM_CLK_PWM_X_SEL_16MHZ(0); // (pwm_drv_desc->channel); // select 16MHz
    }
    else
    {
        pwm_div_set(0);
        ICU_PWM_CLK_PWM_X_SEL_32KHZ(pwm_drv_desc->channel); // select 32KHz
    }
    //Config duty_cycle and end value
    REG_PWM_X_CNT(pwm_drv_desc->channel) =
        (((unsigned long)pwm_drv_desc->duty_cycle << PWM_CNT_DUTY_CYCLE_POSI) & PWM_CNT_DUTY_CYCLE_MASK) |
        (((unsigned long)pwm_drv_desc->end_value << PWM_CNT_END_VALUE_POSI) & PWM_CNT_END_VALUE_MASK);
    REG_PWM_CTRL = (REG_PWM_CTRL & ~(0x0F << (0x04 * pwm_drv_desc->channel))) |
        ((pwm_drv_desc->mode & 0x0F) << (0x04 * pwm_drv_desc->channel));
    if (pwm_drv_desc->mode & 0x02) // int enable 定时器
    {
        ...
    }
}
```

问题 2: BK3431Q 每一路 PWM 时钟是独立的, BK3432 却不是他是公用的这样就有一个问题就是 BK3431Q 假如 PWM0 跑 16M, PWM1 是跑 32K, 但是 BK3432 假如 PWM0 跑 16M, PWM1 是不能跑 32K 了。