

## SYD8811 WDT 使用说明

### 一、WDT 时钟说明

SYD8811提供16 位倒计时看门狗以完成监测功能，以实现在系统硬件错误或者程序错误时重启系统。

看门狗的时钟是32.768Khz时钟，递减计数器的单位时间为 $256/32.768 = 7.8\text{ms}$

### 二、测试用例

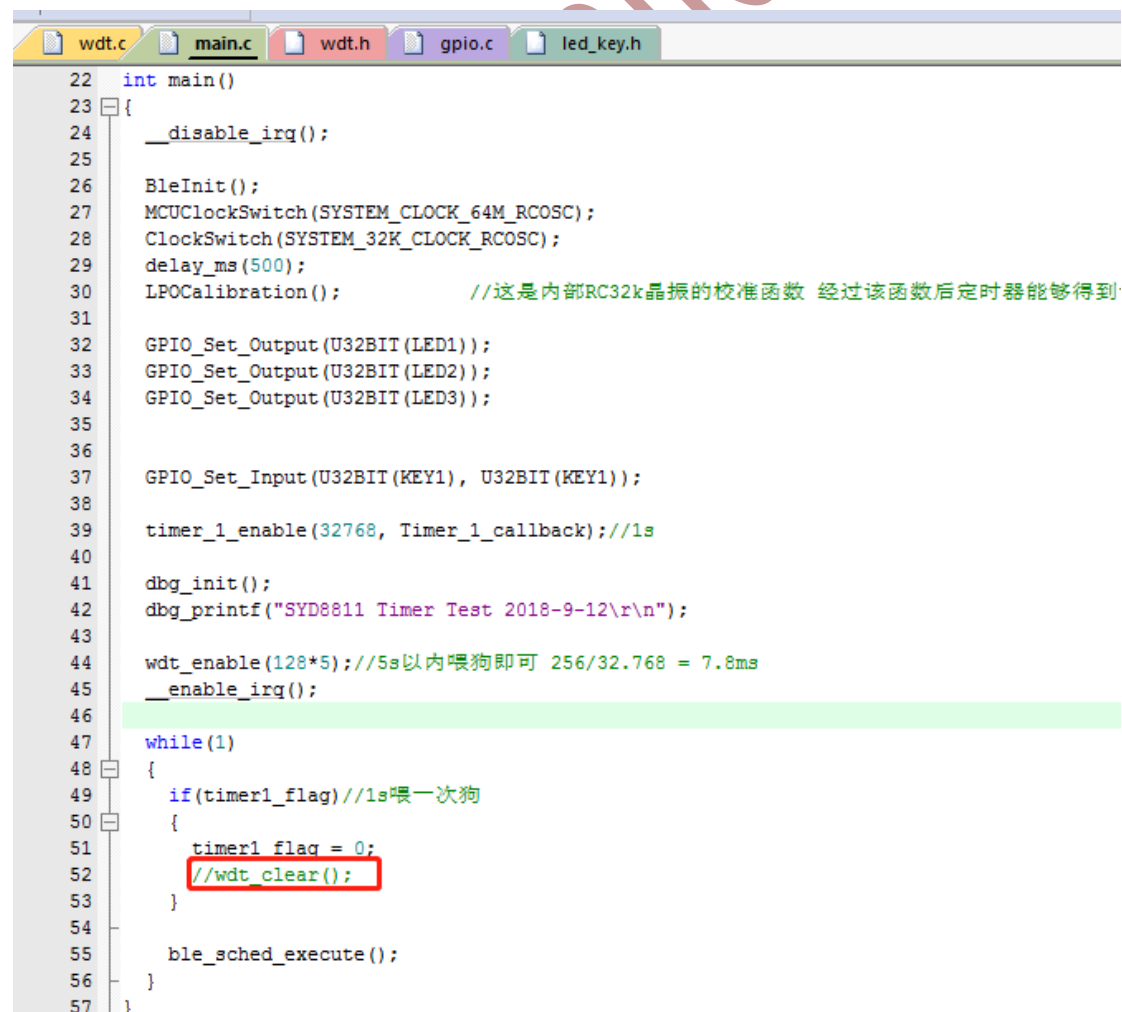
在 8811 的 SDK 的目录 SYD8811\_SDK\_Git\_Release\Source Code\SYD8811\_peripheral\wdt 下

1、设置看门狗 5 秒喂狗，系统工作 1s 喂狗，5 秒没有复位，工作正常。

```
[18:43:25.845]收←◆SYD8811 Timer Test 2018-9-12
[18:43:26.844]收←◆Timer_1_callback
[18:43:27.845]收←◆Timer_1_callback
[18:43:28.846]收←◆Timer_1_callback
[18:43:29.846]收←◆Timer_1_callback
[18:43:30.847]收←◆Timer_1_callback
[18:43:31.849]收←◆Timer_1_callback
[18:43:32.849]收←◆Timer_1_callback
[18:43:33.851]收←◆Timer_1_callback
[18:43:34.852]收←◆Timer_1_callback
[18:43:35.853]收←◆Timer_1_callback
[18:43:36.853]收←◆Timer_1_callback
[18:43:37.854]收←◆Timer_1_callback
```

打印的 log

2、测试看门狗复位，即在设定 5 秒看门狗，不喂狗，系统就会复位



```
wdt.c  main.c  wdt.h  gpio.c  led_key.h
22 int main()
23 {
24     __disable_irq();
25
26     BleInit();
27     MCUClockSwitch(SYSTEM_CLOCK_64M_RCOSC);
28     ClockSwitch(SYSTEM_32K_CLOCK_RCOSC);
29     delay_ms(500);
30     LPOCalibration(); //这是内部RC32k晶振的校准函数 经过该函数后定时器能够得到
31
32     GPIO_Set_Output(U32BIT(LED1));
33     GPIO_Set_Output(U32BIT(LED2));
34     GPIO_Set_Output(U32BIT(LED3));
35
36
37     GPIO_Set_Input(U32BIT(KEY1), U32BIT(KEY1));
38
39     timer_1_enable(32768, Timer_1_callback); //1s
40
41     dbg_init();
42     dbg_printf("SYD8811 Timer Test 2018-9-12\r\n");
43
44     wdt_enable(128*5); //5s以内喂狗即可 256/32.768 = 7.8ms
45     __enable_irq();
46
47     while(1)
48     {
49         if(timer1_flag) //1s喂一次狗
50         {
51             timer1_flag = 0;
52             wdt_clear();
53         }
54
55         ble_sched_execute();
56     }
57 }
```

```
[18:39:58.123]收←◆SYD8811 Timer Test 2018-9-12
[18:39:59.122]收←◆Timer_1_callback
[18:40:00.123]收←◆Timer_1_callback
[18:40:01.123]收←◆Timer_1_callback
[18:40:02.124]收←◆Timer_1_callback
[18:40:03.125]收←◆Timer_1_callback
[18:40:03.539]收←◆SYD8811 Timer Test 2018-9-12
[18:40:04.538]收←◆Timer_1_callback
[18:40:05.538]收←◆Timer_1_callback
[18:40:06.538]收←◆Timer_1_callback
[18:40:07.538]收←◆Timer_1_callback
[18:40:08.538]收←◆Timer_1_callback
[18:40:08.954]收←◆SYD8811 Timer Test 2018-9-12
[18:40:09.954]收←◆Timer_1_callback
[18:40:10.954]收←◆Timer_1_callback
[18:40:11.955]收←◆Timer_1_callback
[18:40:12.955]收←◆Timer_1_callback
[18:40:13.975]收←◆Timer_1_callback
[18:40:14.371]收←◆SYD8811 Timer Test 2018-9-12
[18:40:15.371]收←◆Timer_1_callback
[18:40:16.372]收←◆Timer_1_callback
```

打印的 log

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