S5D9 Lab LED pin write with timer interrupt
By
Michael Li
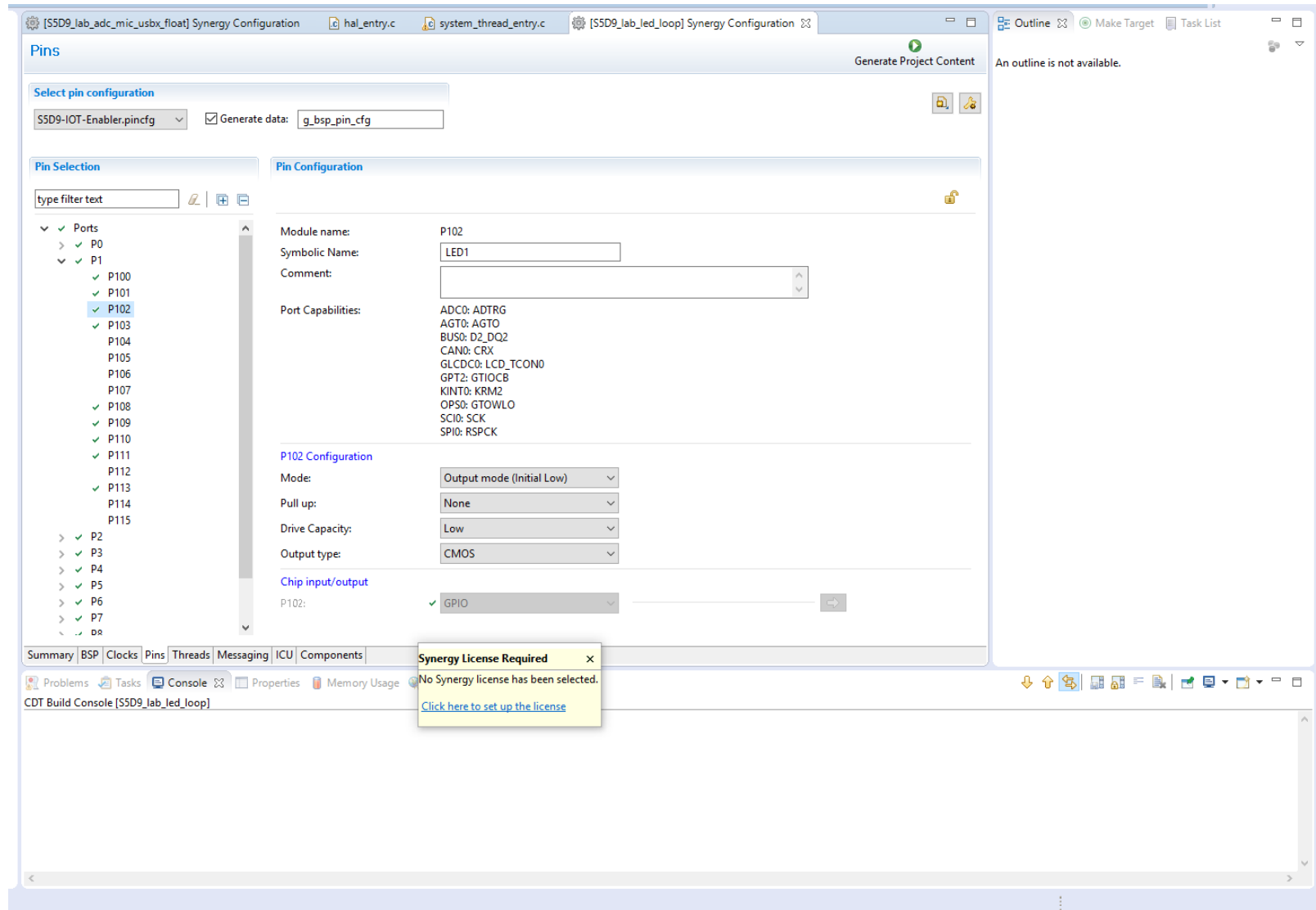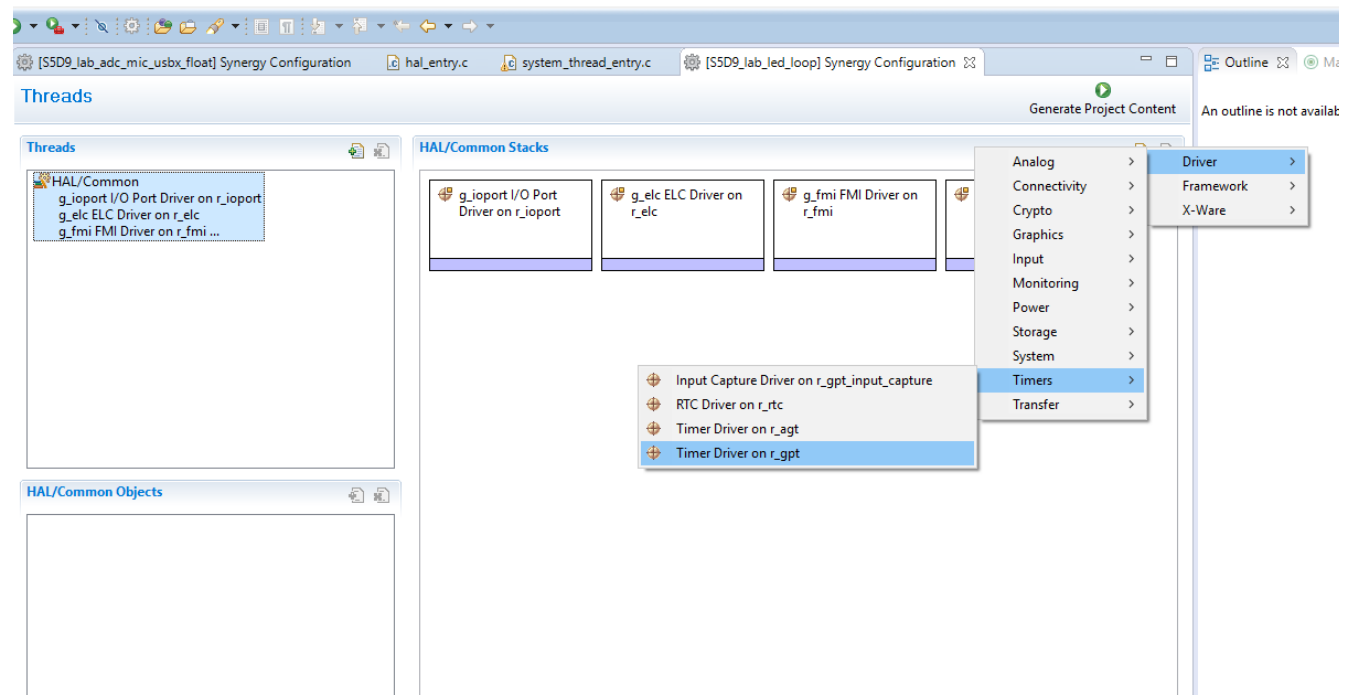# (2/2/2018)
https://www.miketechuniverse.com

E2 Studio 5.4.0.023
SSP 1.3.0

S7G2 Lab LED register with loop delay
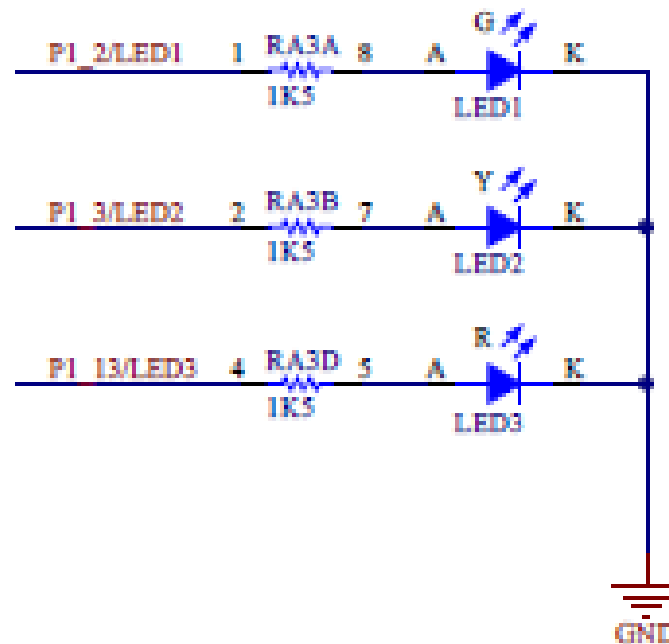
Pin enabled (GPIO output)

Get Timer Driver
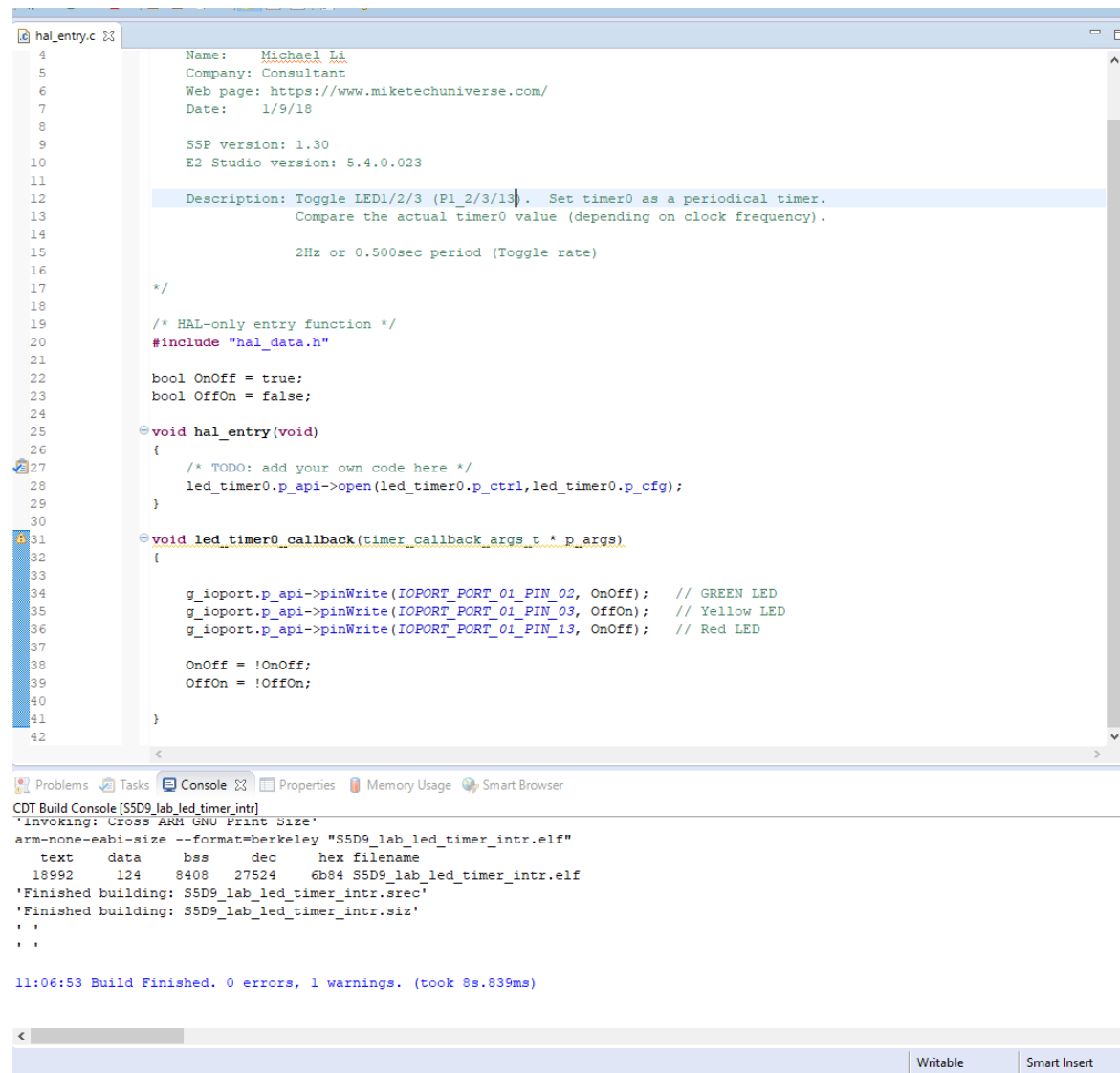
Add Callback and Interrupt Priority

Main Code

```
  4        Name:    Michael Li
  5        Company: Consultant
  6        Web page: https://www.miketechuniverse.com/
  7        Date:    1/9/18
  8
  9        SSP version: 1.30
 10        E2 Studio version: 5.4.0.023
 11
 12        Description: Toggle LED1/2/3 (P1_2/3/13).  Set timer0 as a periodical timer.
 13                    Compare the actual timer0 value (depending on clock frequency).
 14
 15                    2Hz or 0.500sec period (Toggle rate)
 16
 17    */
 18
 19    /* HAL-only entry function */
 20    #include "hal_data.h"
 21
 22    bool OnOff = true;
 23    bool OffOn = false;
 24
 25    void hal_entry(void)
 26    {
 27        /* TODO: add your own code here */
 28        led_timer0.p_api->open(led_timer0.p_ctrl,led_timer0.p_cfg);
 29    }
 30
 31    void led_timer0_callback(timer_callback_args_t * p_args)
 32    {
 33
 34        g_ioport.p_api->pinWrite(IOPORT_PORT_01_PIN_02, OnOff);   // GREEN LED
 35        g_ioport.p_api->pinWrite(IOPORT_PORT_01_PIN_03, OffOn);   // Yellow LED
 36        g_ioport.p_api->pinWrite(IOPORT_PORT_01_PIN_13, OnOff);   // Red LED
 37
 38        OnOff = !OnOff;
 39        OffOn = !OffOn;
 40
 41    }
 42
```

```
Problems  Tasks  Console  Properties  Memory Usage  Smart Browser
CDT Build Console [S5D9_lab_led_timer_intr]
'Invoking: Cross ARM GNU Print Size'
arm-none-eabi-size --format=berkeley "S5D9_lab_led_timer_intr.elf"
   text    data    bss    dec    hex filename
  18992     124   8408  27524   6b84 S5D9_lab_led_timer_intr.elf
'Finished building: S5D9_lab_led_timer_intr.srec'
'Finished building: S5D9_lab_led_timer_intr.siz'
' '
' '

11:06:53 Build Finished. 0 errors, 1 warnings. (took 8s.839ms)
```

Timer Interrupt Example by Michael C. Li