

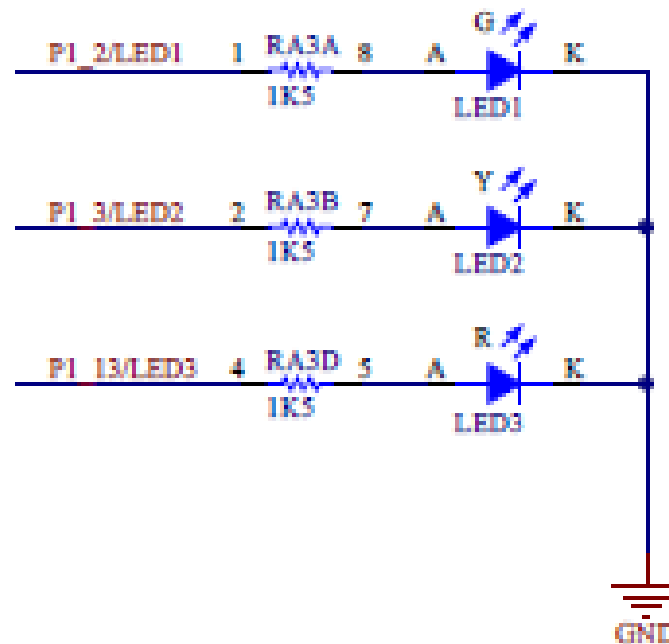
S5D9 Lab LED pin write with timer interrupt

By
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(2/2/2018)

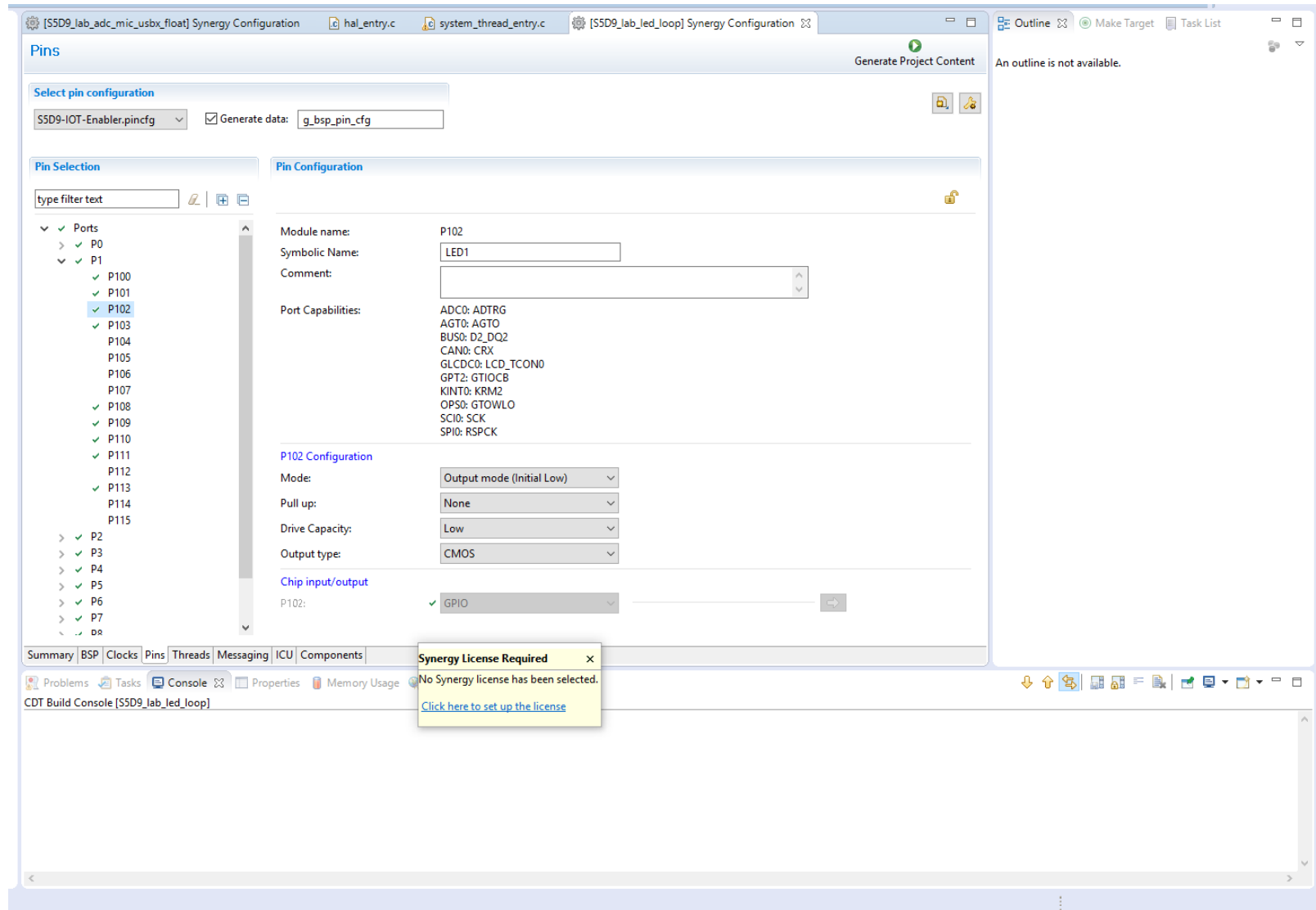
<https://www.miketechuniverse.com>

E2 Studio 5.4.0.023
SSP 1.3.0

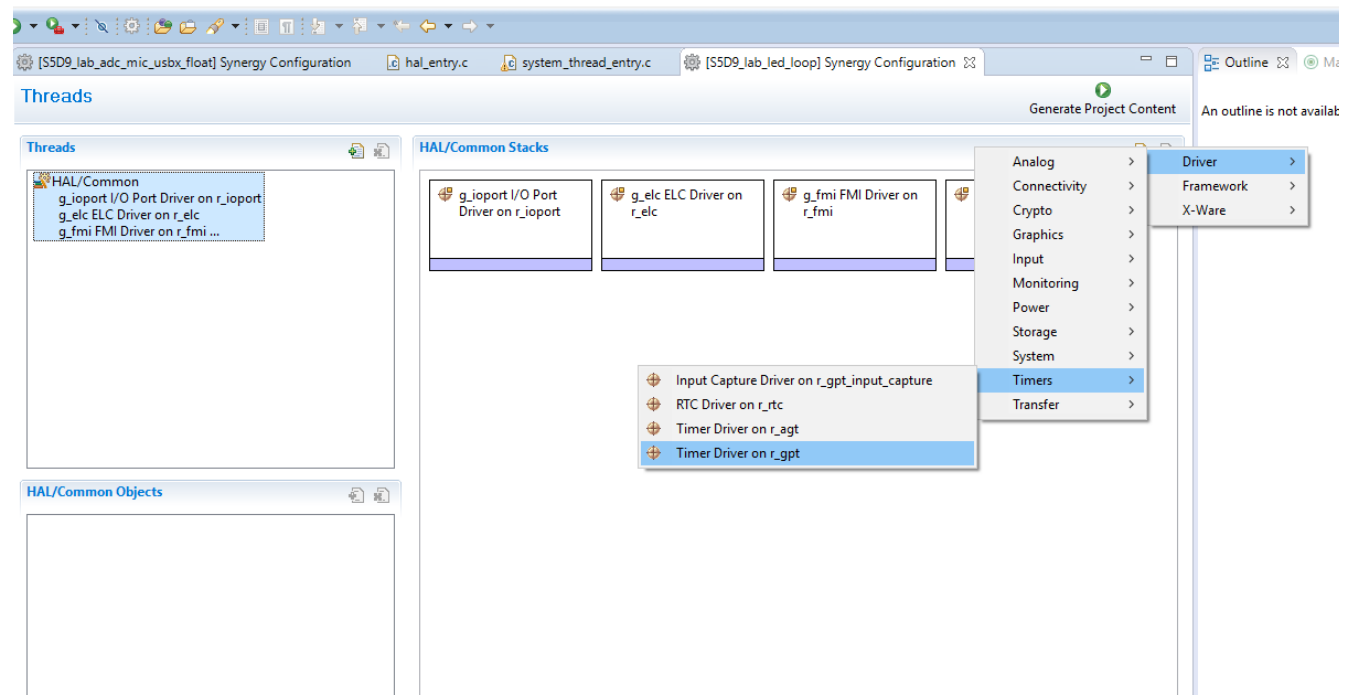
S7G2 Lab LED register with loop delay



Pin enabled (GPIO output)



Get Timer Driver

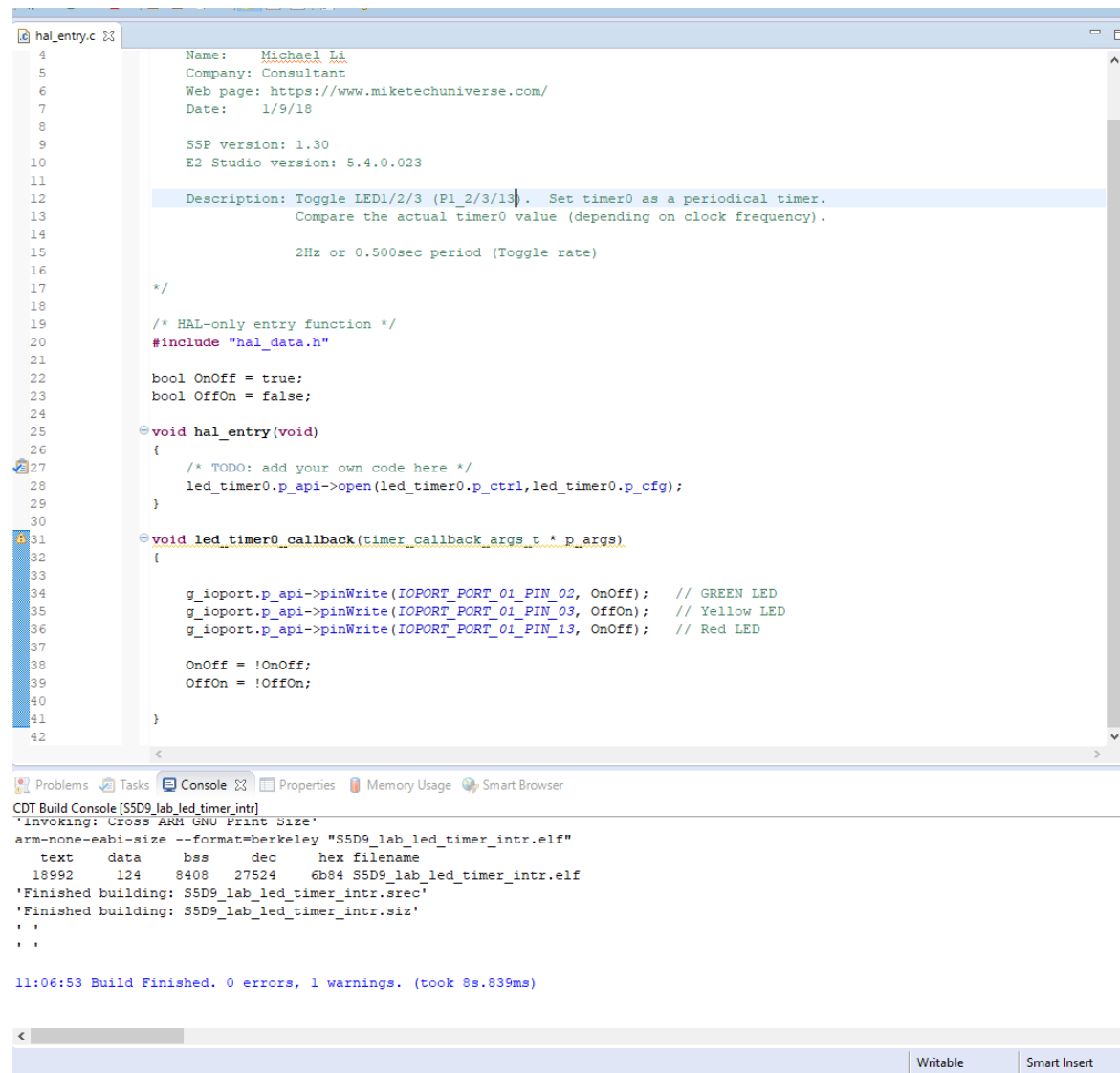


Add Callback and Interrupt Priority

The screenshot displays the Synergy Configuration IDE interface for a project named 'SSD9_lab_led_timer_intr'. The main workspace is divided into several panes:

- Project Explorer:** Lists various components and modules, including 'SSD9_I2C_INT_ENV210_OLED_SHT31_v1b' and 'SSD9_lab_led_timer_intr'.
- Threads:** Shows the 'HAL/Common' thread with components like 'g_cgc CGC Driver on r_cgc' and 'g_fmi FMI Driver on r_fmi'.
- HAL/Common Stacks:** Displays a stack of components including 'g_cgc CGC Driver on r_cgc', 'g_fmi FMI Driver on r_fmi', 'g_ioport I/O Port Driver on r_ioport', 'g_elc ELC Driver on r_elc', and 'g_timer0 Timer Driver on r_gpt'.
- Properties:** Shows the properties for the 'g_timer0 Timer Driver on r_gpt' component. The 'Callback' property is set to 'led_timer0_callback', and the 'Interrupt Priority' is set to 'Priority 6 (CM4: valid, CM0+: invalid)'. Arrows point to these two properties.
- Workspace Log:** Displays a list of messages and errors, including 'Input file not found' and 'Keybinding conflicts occurred'.

Main Code



```
hal_entry.c
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 (Pl_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 [SSD9_lab_led_timer_intr]
'Invoking: Cross ARM GNU Print Size'
arm-none-eabi-size --format=berkeley "SSD9_lab_led_timer_intr.elf"
text data bss dec hex filename
18992 124 8408 27524 6b84 SSD9_lab_led_timer_intr.elf
'Finished building: SSD9_lab_led_timer_intr.srec'
'Finished building: SSD9_lab_led_timer_intr.siz'
,,
,,

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

Writable Smart Insert