S5D9 I2C Bus Example (IIC Driver Version)

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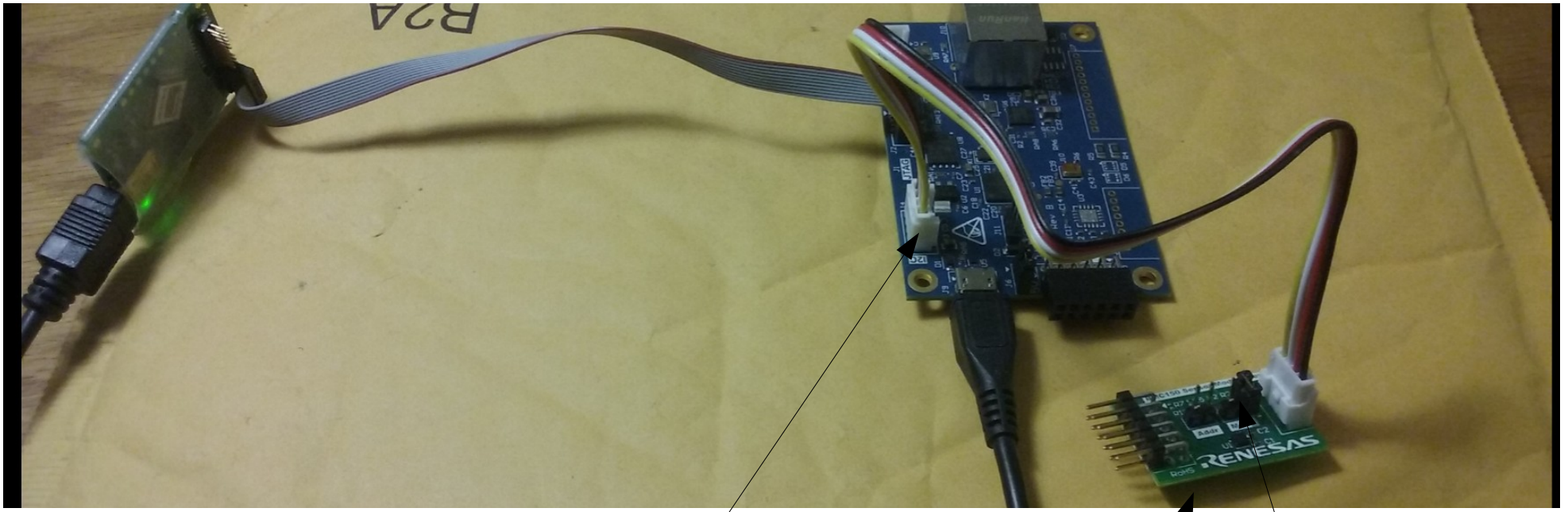
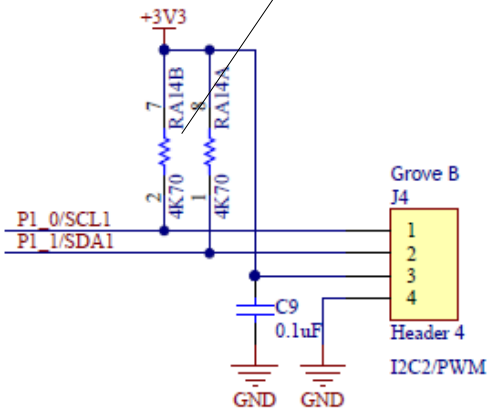
https://www.miketechuniverse.com

E2 Studio 5.4.0.023
SSP 1.3.0

Hardware Connection

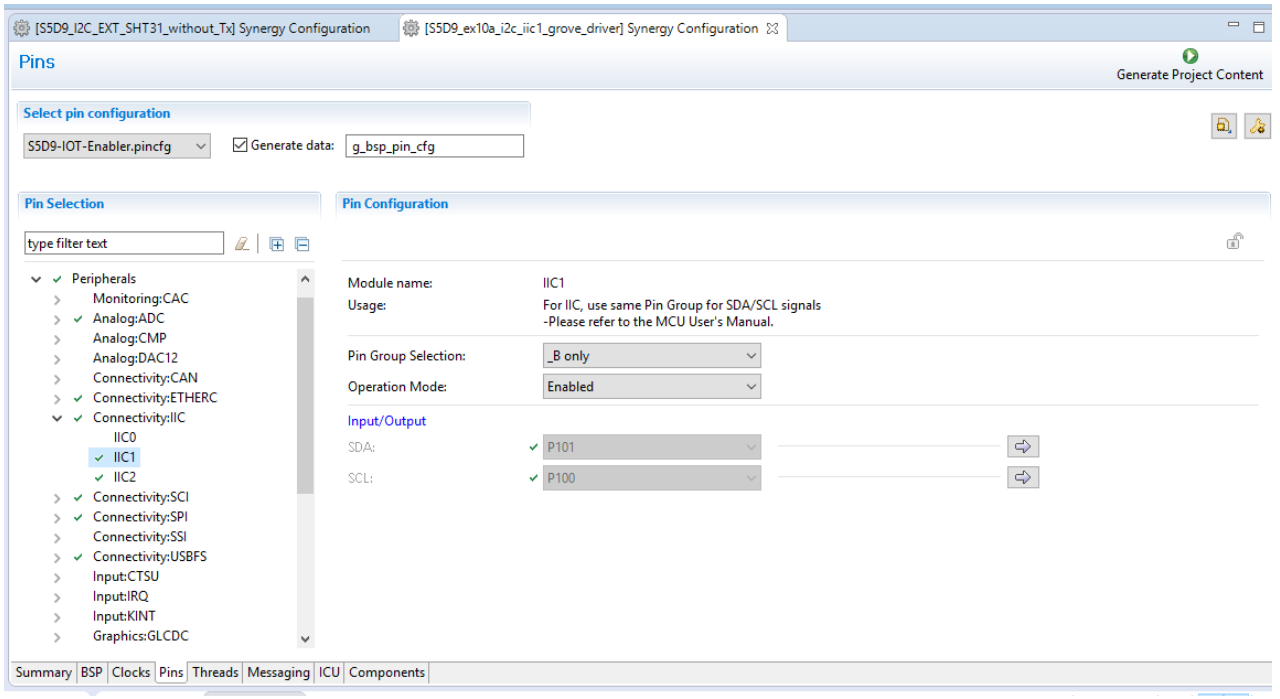




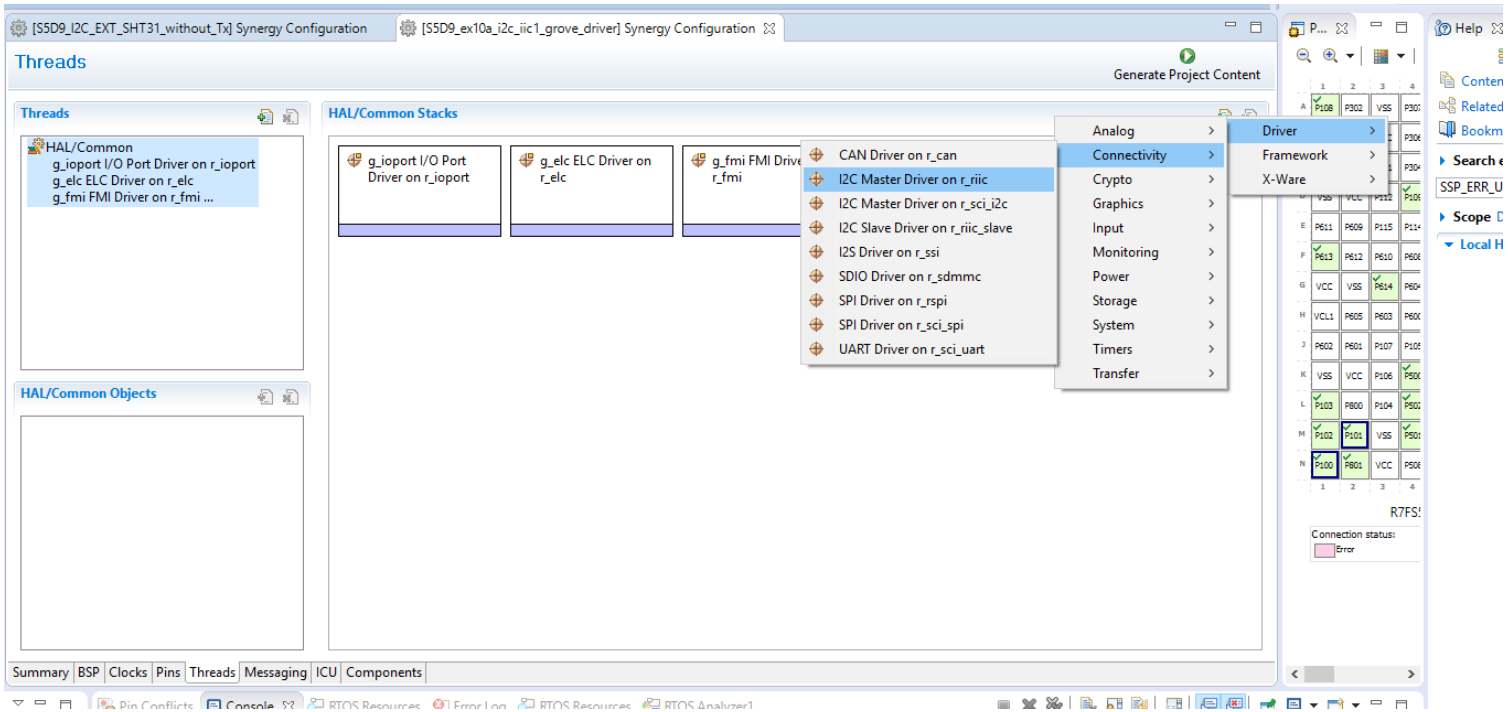
Open for the I2C mode

Note: BMC150 Module is part of S7A3 IOT Smart Chef Starter Kit

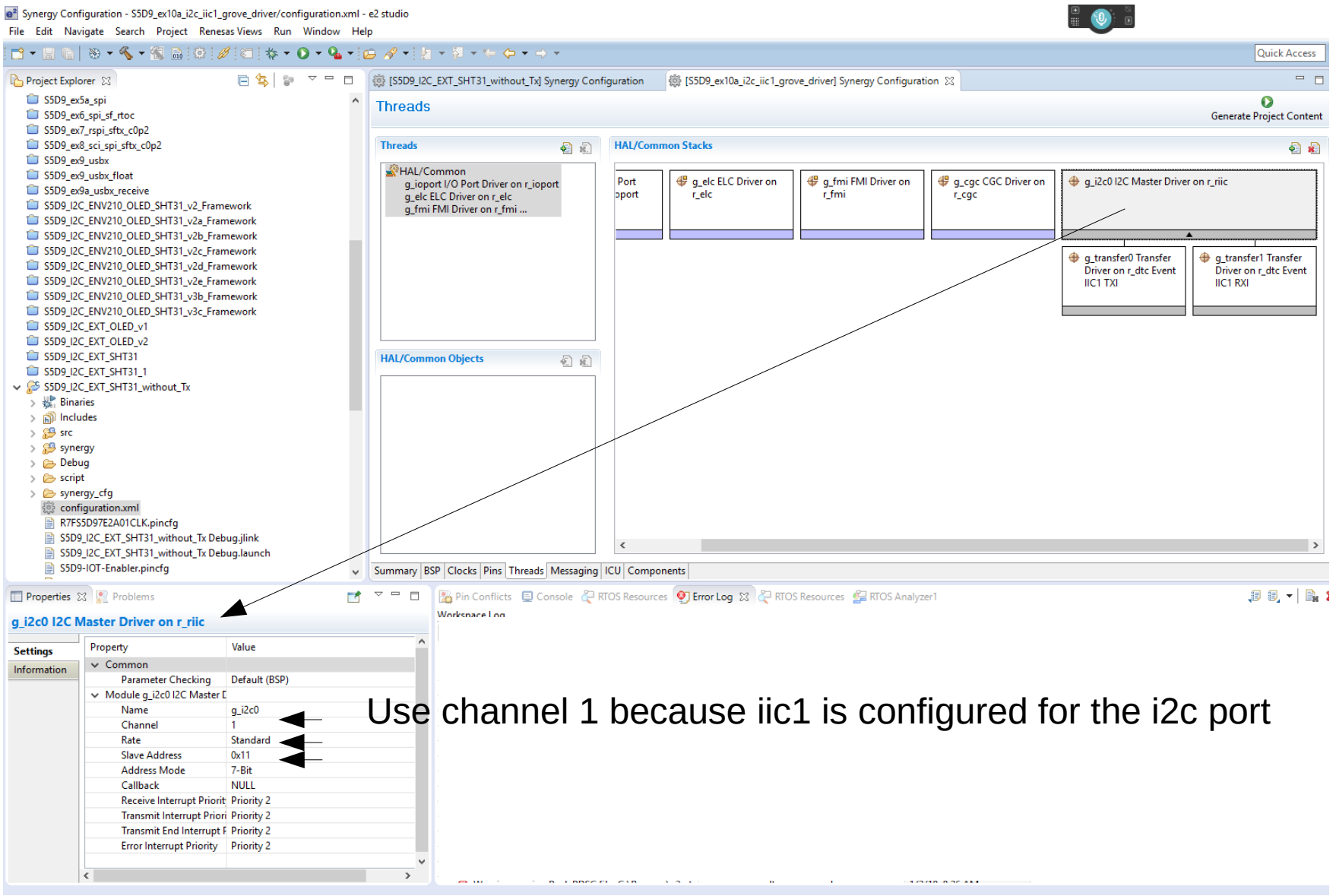
Pin Configuration



Add Driver

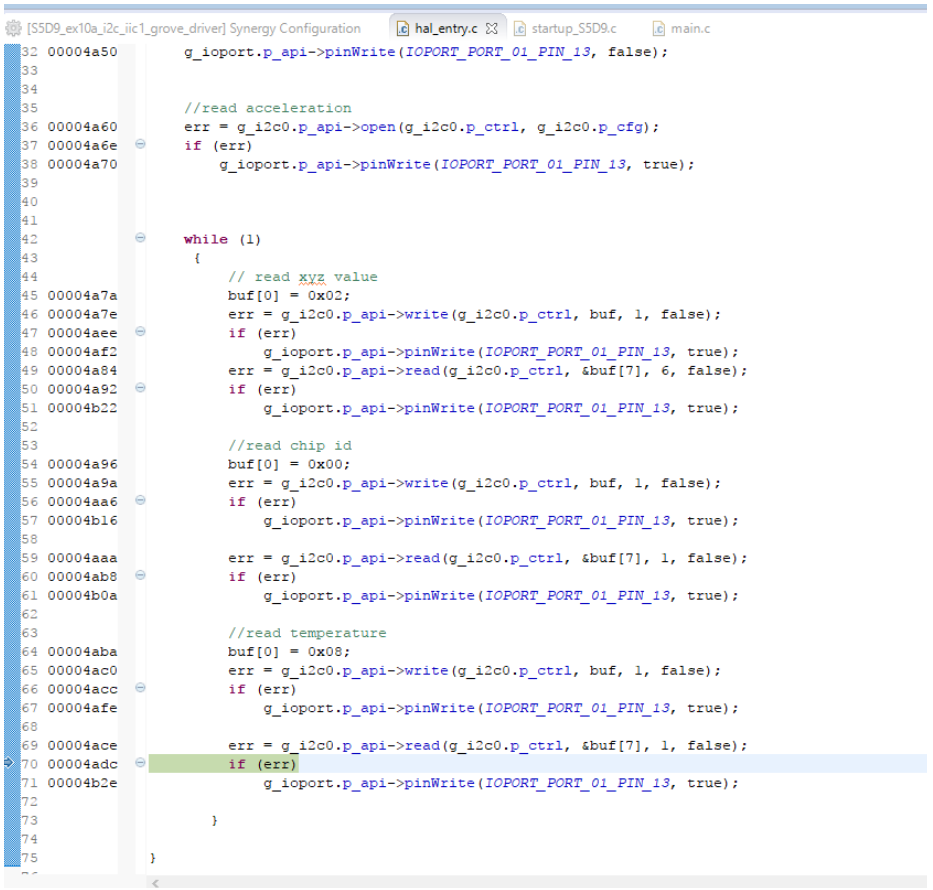

[S5D9_I2C_EXT_SHT31_without_Tx] Synergy Configuration
[S5D9_ex10a_i2c_iic1_grove_driver] Synergy Configuration
Threads
Generate Project Content
Threads
HAL/Common
g_ioport I/O Port Driver on r_ioport
g_elc ELC Driver on r_elc
g_fmi FMI Driver on r_fmi ...
HAL/Common Objects
HAL/Common Stacks
g_ioport I/O Port Driver on r_ioport
g_elc ELC Driver on r_elc
CAN Driver on r_can
I2C Master Driver on r_riic
I2C Master Driver on r_sci_i2c
I2C Slave Driver on r_riic_slave
I2S Driver on r_ssi
SDIO Driver on r_sdmmc
SPI Driver on r_rspi
SPI Driver on r_sci_spi
UART Driver on r_sci_uart
Analog
Connectivity
Crypto
Graphics
Input
Monitoring
Power
Storage
System
Timers
Transfer
Driver
Framework
X-Ware
Summary
BSP
Clocks
Pins
Threads
Messaging
ICU
Components
Help

Driver Properties



Use channel 1 because iic1 is configured for the i2c port

Main Code




```
32 00004a50     g_ioport.p_api->pinWrite(IOPORT_PORT_01_PIN_13, false);
33
34
35              //read acceleration
36 00004a60     err = g_i2c0.p_api->open(g_i2c0.p_ctrl, g_i2c0.p_cfg);
37 00004a6e     if (err)
38 00004a70         g_ioport.p_api->pinWrite(IOPORT_PORT_01_PIN_13, true);
39
40
41
42              while (1)
43               {
44                   // read xyz value
45 00004a7a         buf[0] = 0x02;
46 00004a7e         err = g_i2c0.p_api->write(g_i2c0.p_ctrl, buf, 1, false);
47 00004aee         if (err)
48 00004af2             g_ioport.p_api->pinWrite(IOPORT_PORT_01_PIN_13, true);
49 00004a84         err = g_i2c0.p_api->read(g_i2c0.p_ctrl, &buf[7], 6, false);
50 00004a92         if (err)
51 00004b22             g_ioport.p_api->pinWrite(IOPORT_PORT_01_PIN_13, true);
52
53                   //read chip id
54 00004a96         buf[0] = 0x00;
55 00004a9a         err = g_i2c0.p_api->write(g_i2c0.p_ctrl, buf, 1, false);
56 00004aa6         if (err)
57 00004b16             g_ioport.p_api->pinWrite(IOPORT_PORT_01_PIN_13, true);
58
59 00004aaa         err = g_i2c0.p_api->read(g_i2c0.p_ctrl, &buf[7], 1, false);
60 00004ab8         if (err)
61 00004b0a             g_ioport.p_api->pinWrite(IOPORT_PORT_01_PIN_13, true);
62
63                   //read temperature
64 00004aba         buf[0] = 0x08;
65 00004ac0         err = g_i2c0.p_api->write(g_i2c0.p_ctrl, buf, 1, false);
66 00004acc         if (err)
67 00004afe             g_ioport.p_api->pinWrite(IOPORT_PORT_01_PIN_13, true);
68
69 00004ace         err = g_i2c0.p_api->read(g_i2c0.p_ctrl, &buf[7], 1, false);
70 00004adc         if (err)
71 00004b2e             g_ioport.p_api->pinWrite(IOPORT_PORT_01_PIN_13, true);
72
73                }
74
75          }
```

Chip ID Read (0xFA)