Matthew Hoffman
CpE 403 – Advanced Embedded Systems
CC1350 Lab 4

Task 1- Importing the WSN Examples

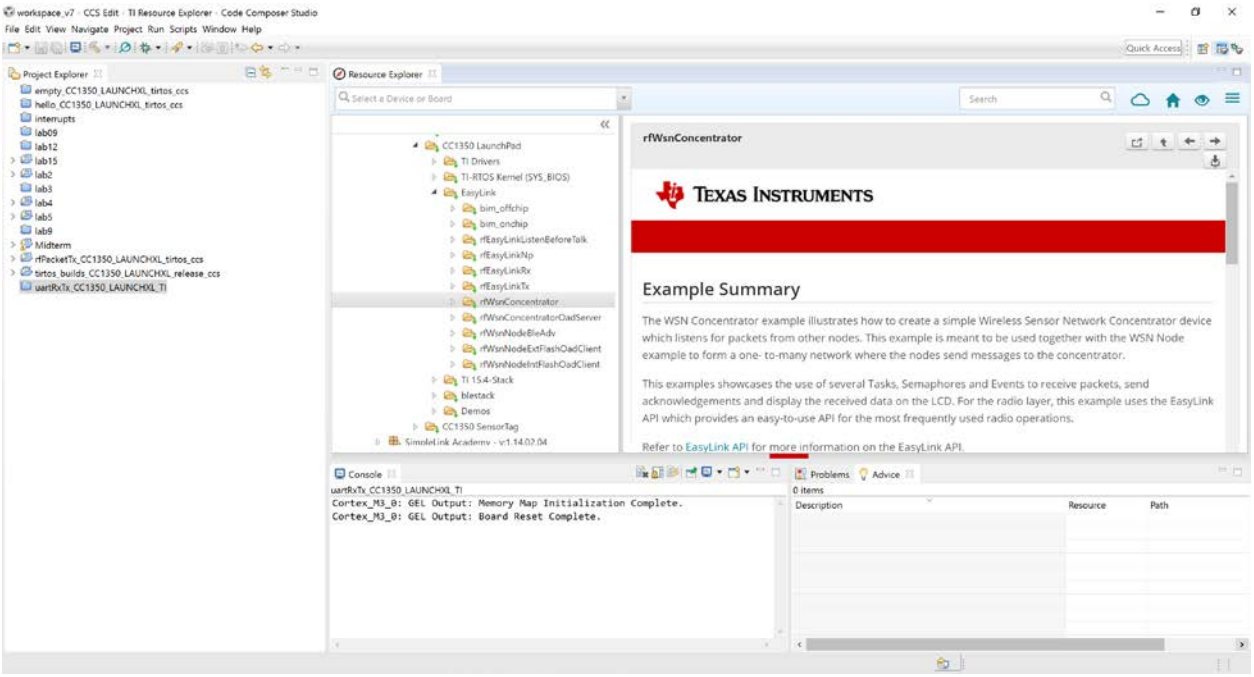

Figure 1. Task 1.a - rfWsnConcentrator

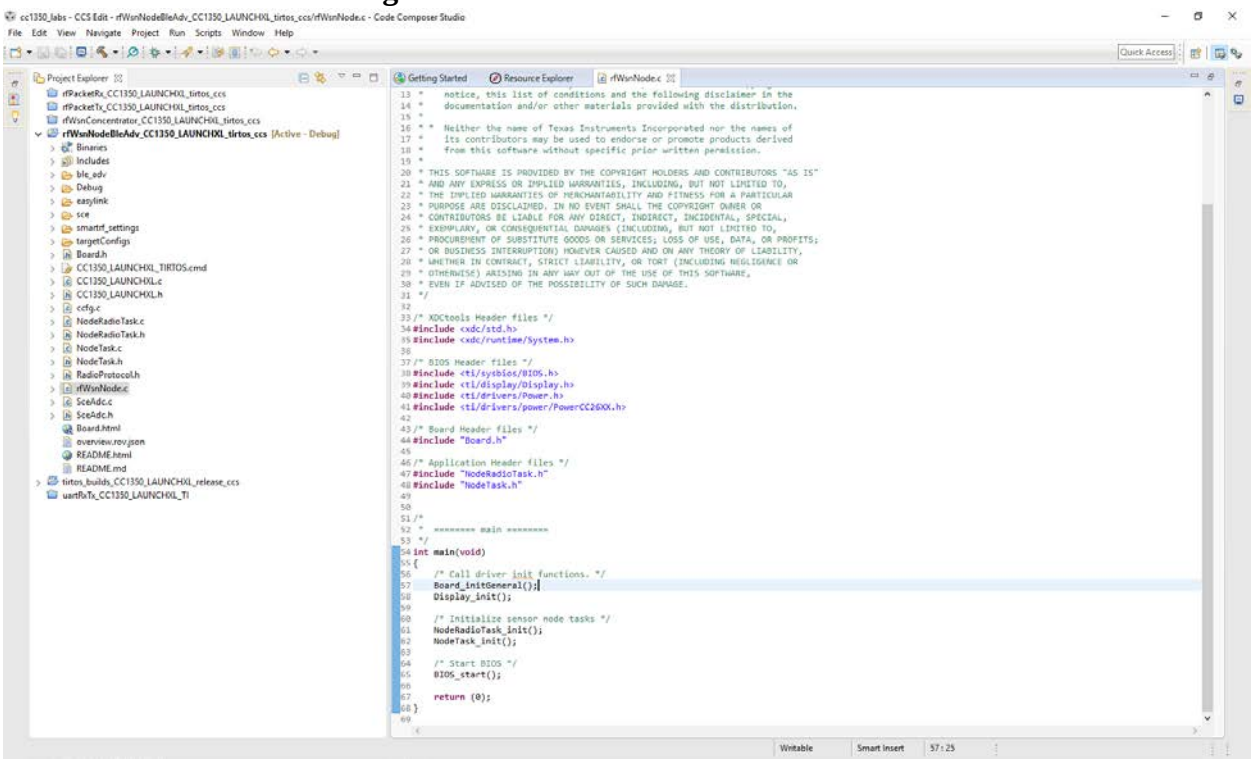

Figure 2. Task 1.b – rfWsnConcentrator

Task 2 – Putting it all to work

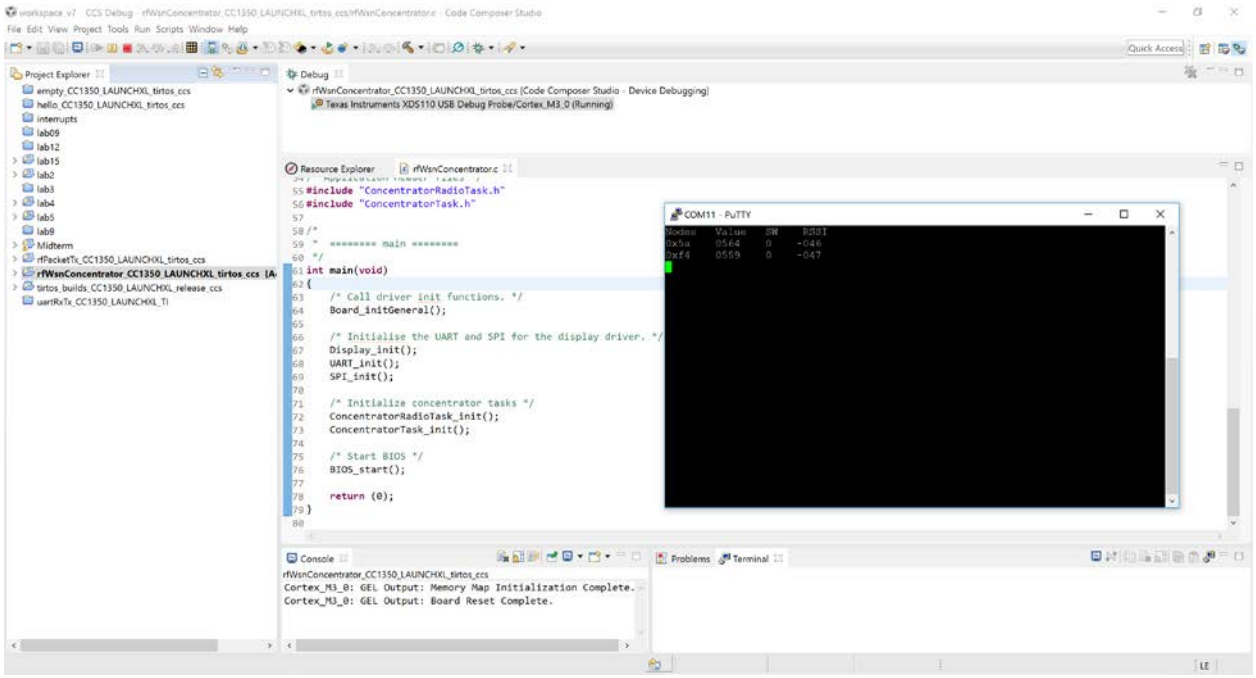

Figure 3. Task 2.a – Node connections

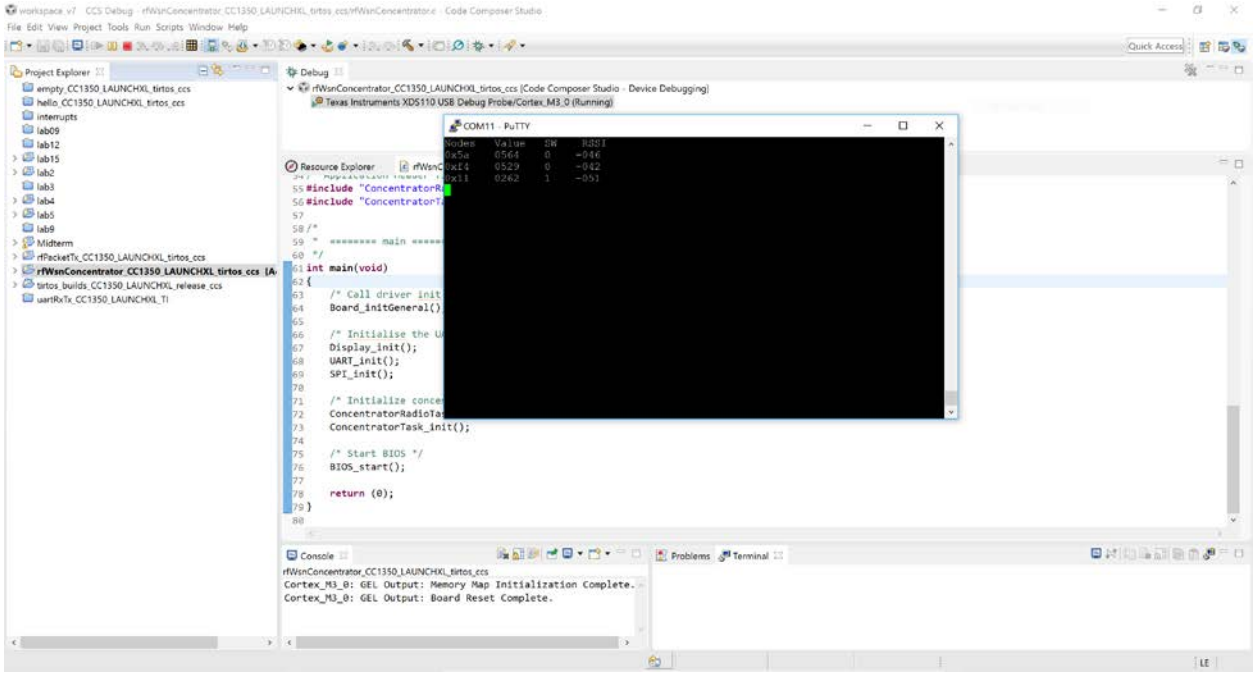

Figure 4. Task 2.b – ADC Value defaults

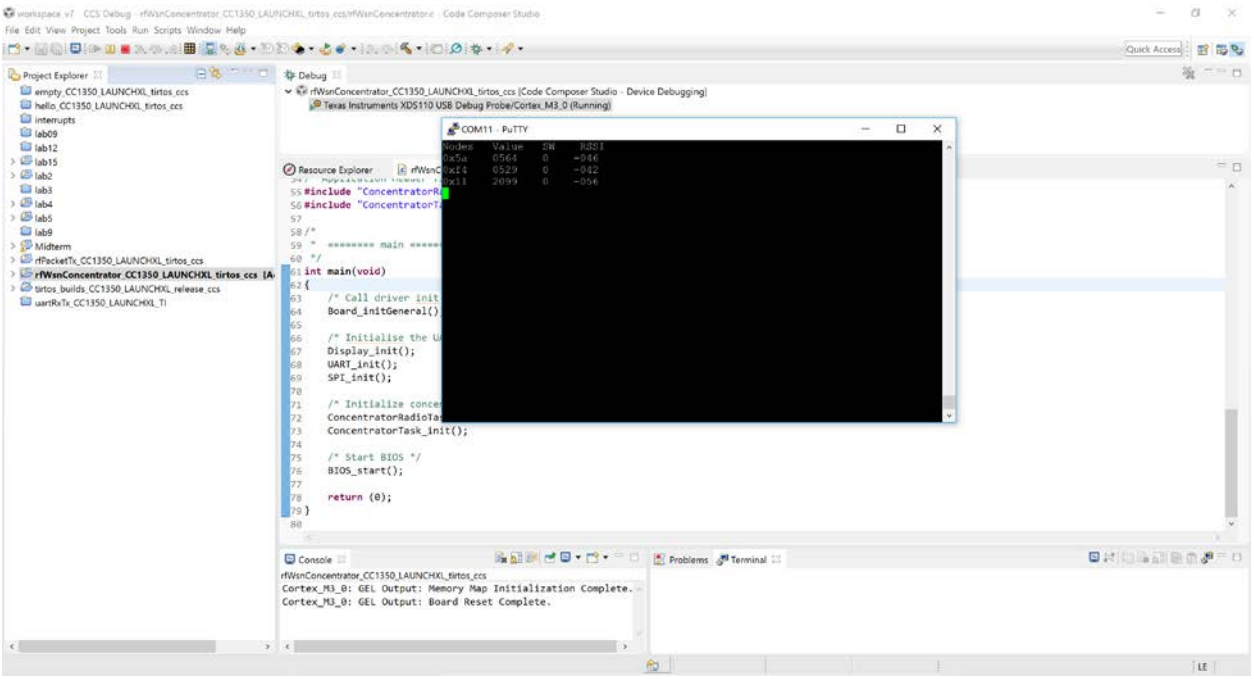

Figure 5. Task 2.c – ADC Value with changed ADV values

Task 3 – Change RF Channel

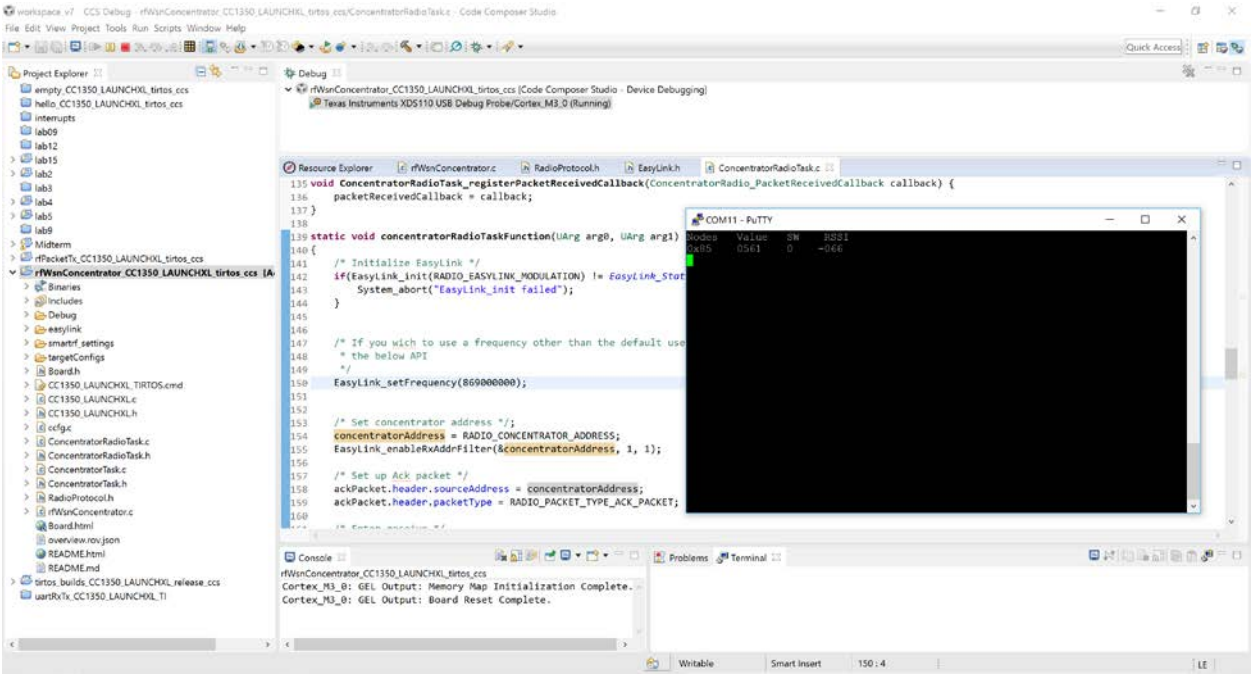

Figure 6. Task 3.a Use of original frequency 868000000

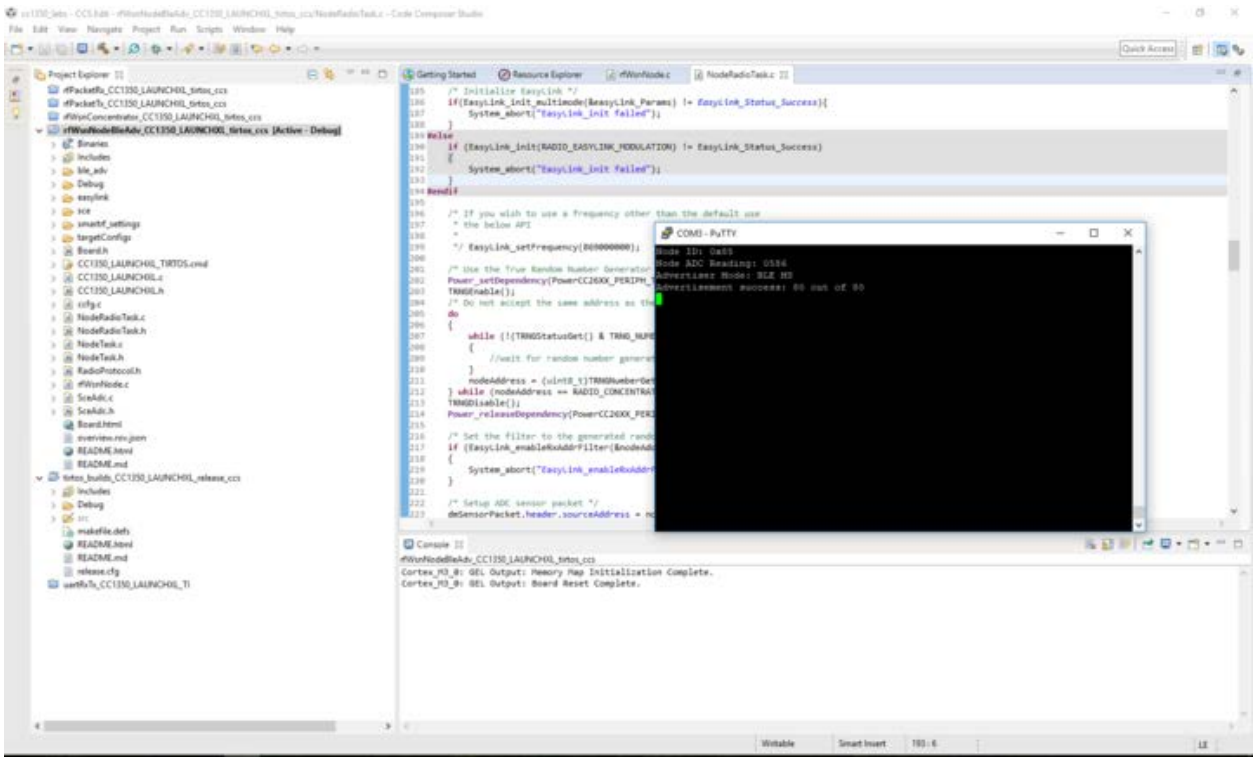

Figure 7. Task 3.b Change of original frequency to 867000000

Task 4 – Switch from 2-GFSK 50 kbps to Long Range Mode (LRM)

```
38
39 #define RADIO_CONCENTRATOR_ADDRESS      0x00
40 #define RADIO_EASYLINK_MODULATION      EasyLink_Phy_50kbps2gfsk
41
42 #define RADIO_PACKET_TYPE_ACK_PACKET              0
212 typedef enum
213 {
214     EasyLink_Phy_Custom = 0,            //!< Customer Phy specific settings exported from SmartRF Studio
215     EasyLink_Phy_50kbps2gfsk = 1,       //!< Phy settings for Sub1G 50kbps data rate, IEEE 802.15.4g GFSK.
216     EasyLink_Phy_625bpsLrm = 2,         //!< Phy settings for Sub1G 625bps data rate, Long Range Mode.
```

Figure 8. Task 4 –Change of short to long range

Task 5 – Modify Code Running on the Sensor Controller

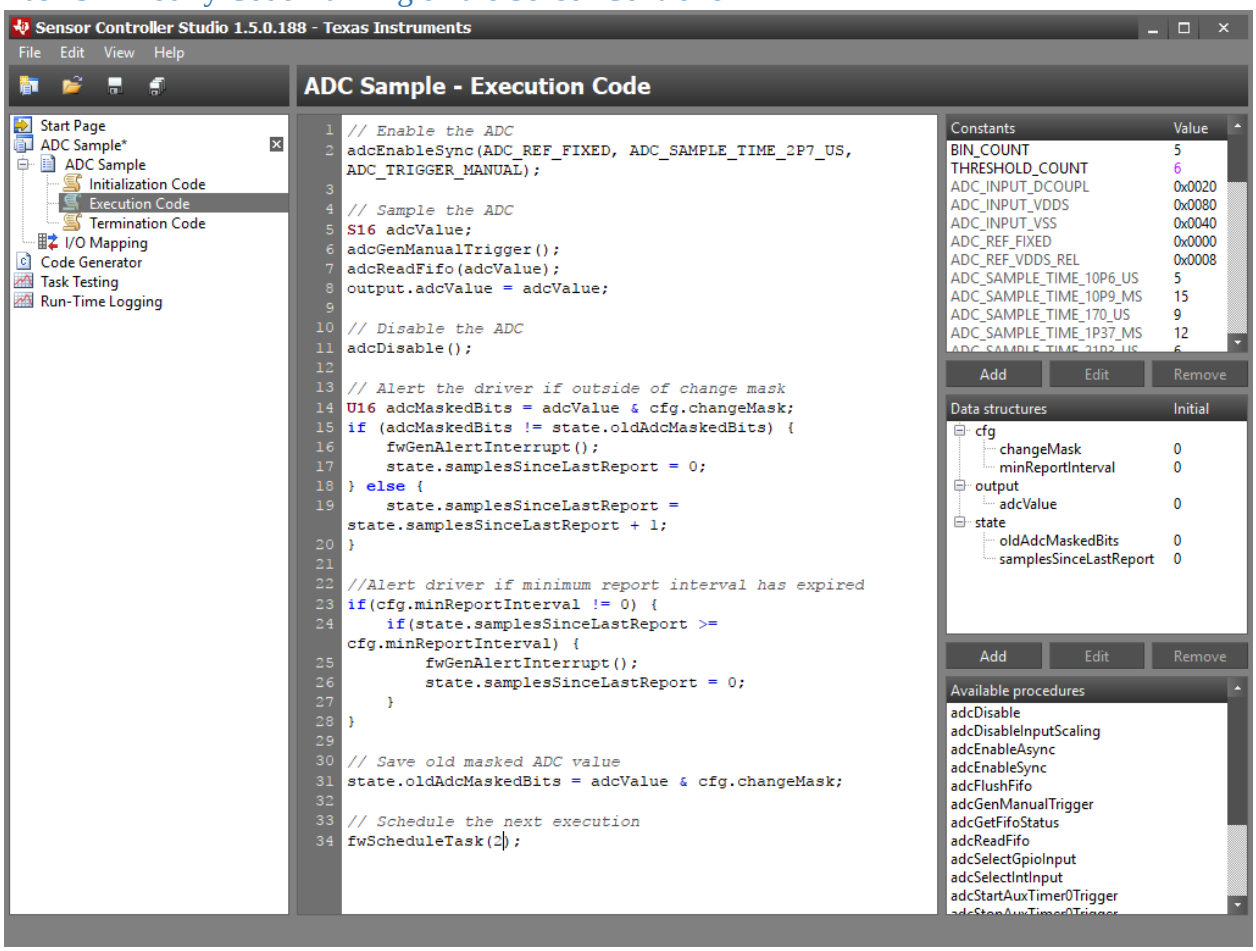

Figure 9. Task 5.a – Sensor Controller Studio Execution Code

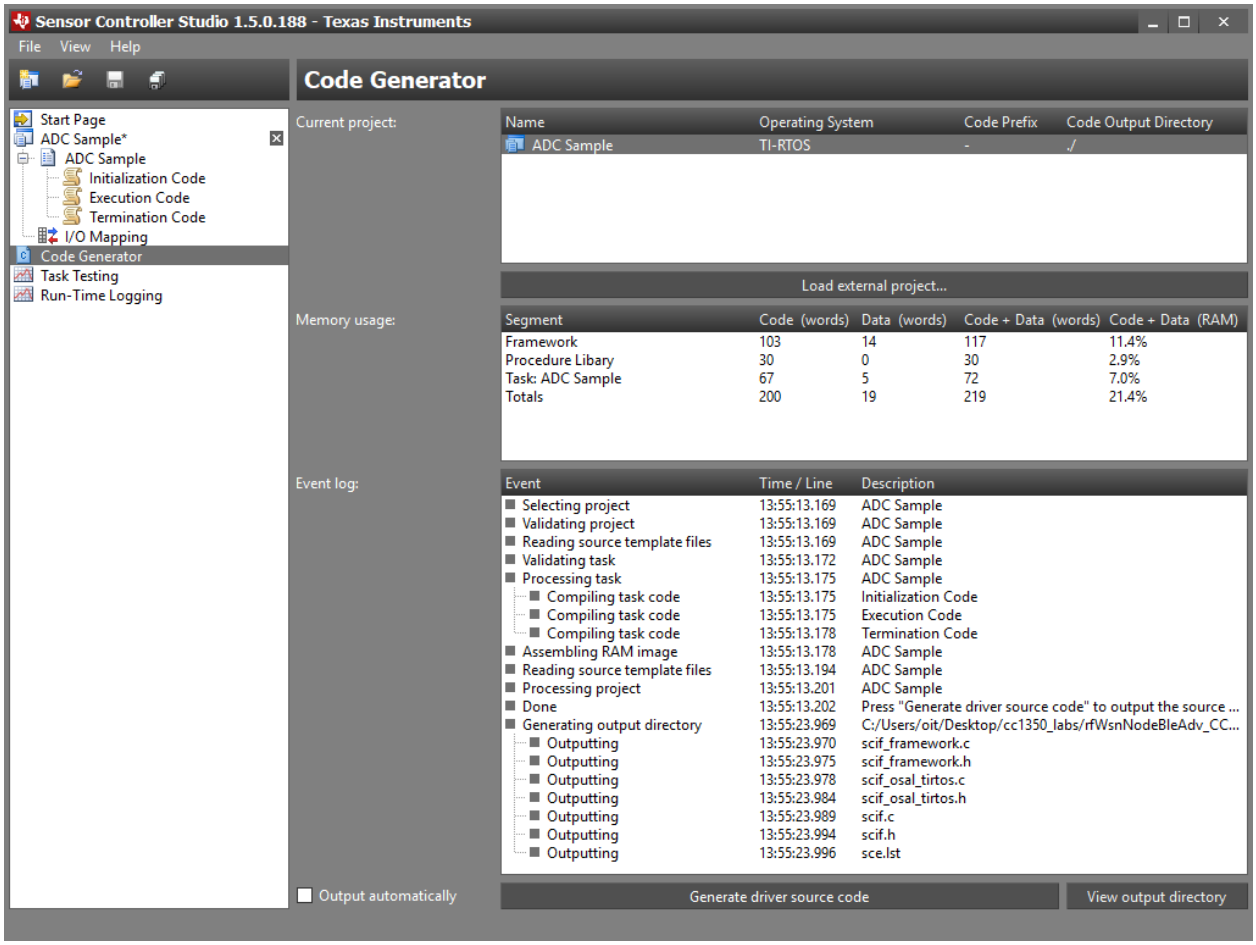

Figure 10. Task 5.b – Code Generator. Sampling Change.

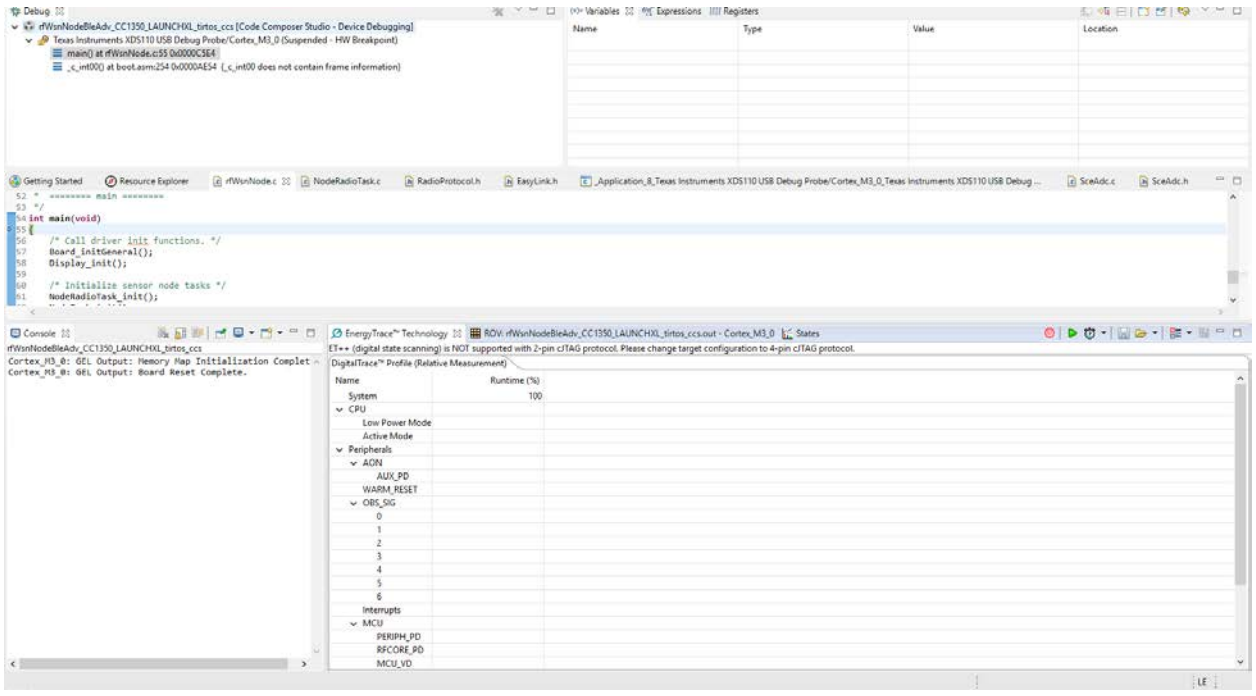

Figure 11. Task 5.c – Energy Trace