

C8051FxxxDK DEVELOPMENT KIT QUICK-START GUIDE FOR KITS FEATURING THE UNIFIED DEVELOPMENT PLATFORM (UDP)

Kit Contents

There are four varieties of general purpose UDP development kits. The content of these kits is listed below:

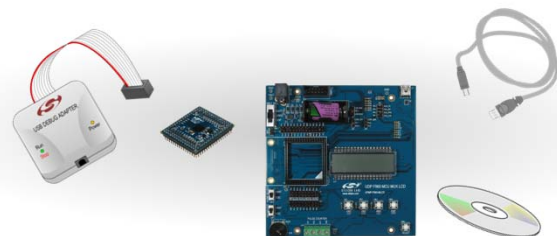
Development Kit

- The specific UDP MCU card.
- Silicon Laboratories USB Debug Adapter.
- Supporting cables.
- C8051FxxxDK Development Kit CD.
- C8051FxxxDK Quick Start Guide (this document).



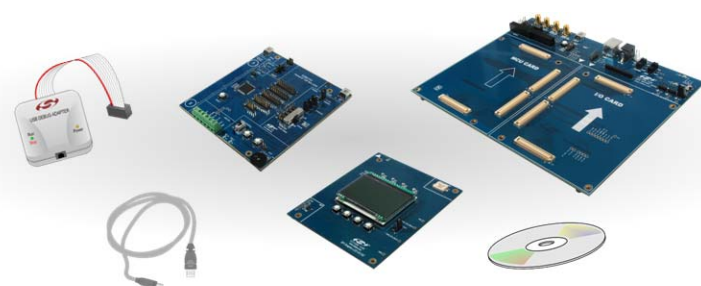
Development Kit with Pico Board

- UPPI Pico Board for the MCU.
- The specific UDP MCU card.
- Silicon Laboratories USB Debug Adapter.
- Supporting cables.
- C8051FxxxDK Development Kit CD.
- C8051FxxxDK Quick Start Guide (this document).



Enhanced Development Kit

- The specific UDP MCU card.
- UDP Motherboard.
- The specific kit I/O card.
- Silicon Laboratories USB Debug Adapter.
- Supporting cables.
- C8051FxxxDK Development Kit CD.
- C8051FxxxDK Quick Start Guide (this document).



Enhanced Development Kit with Pico Board

- UPPI Pico Board for the MCU.
- The specific UDP MCU card.
- UDP Motherboard.
- The specific kit I/O card.
- Silicon Laboratories USB Debug Adapter.
- Supporting cables.
- C8051FxxxDK Development Kit CD.
- C8051FxxxDK Quick Start Guide (this document).



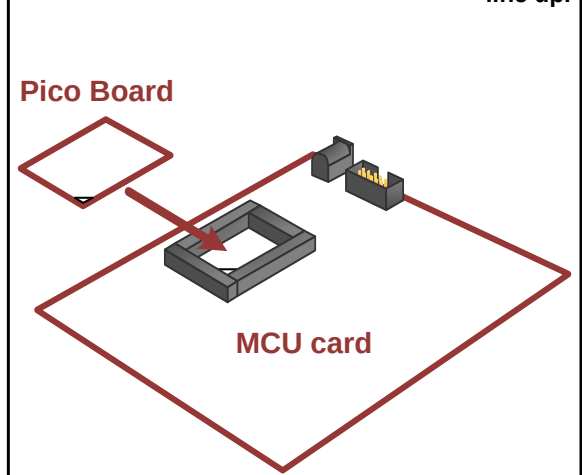
Hardware Setup with the UDP Motherboard

1

If the kit includes a UPPI Pico Board, connect the Pico board to the MCU card. The white triangles on the boards should line up.

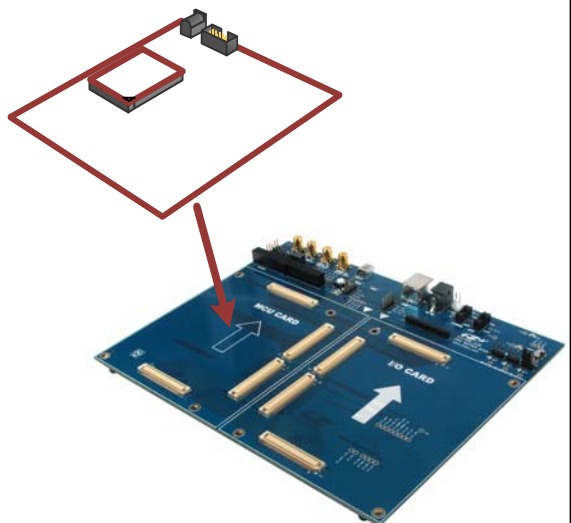
Pico Board

MCU card



2

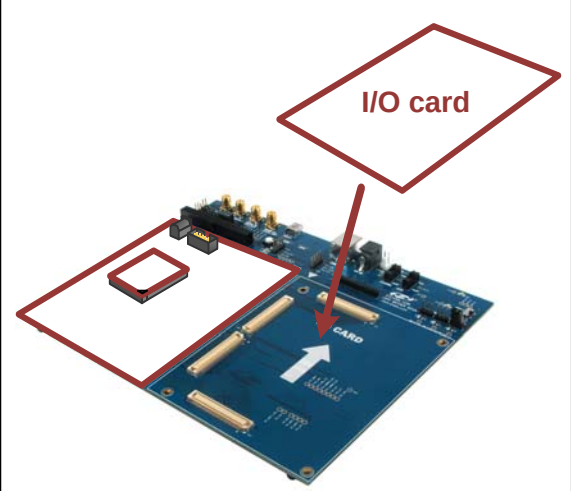
Connect the MCU card to the UDP motherboard.



3

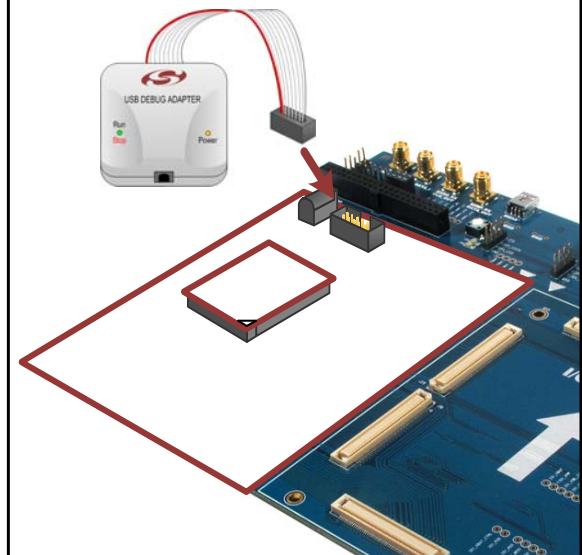
If the kit includes an I/O card, connect the I/O card to the UDP motherboard.

I/O card



4

Connect the USB Debug Adapter ribbon cable to the MCU card.



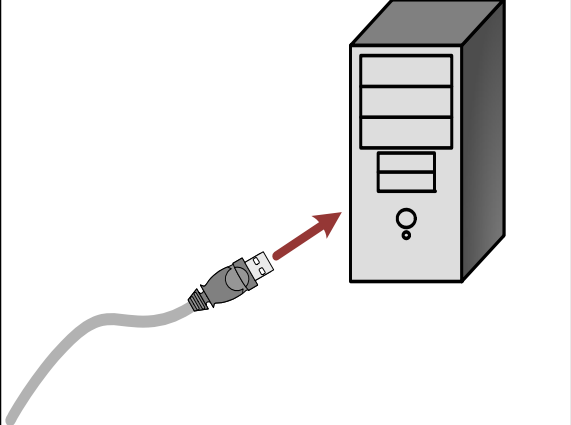
5

Connect a USB cable to the USB Debug Adapter.



6

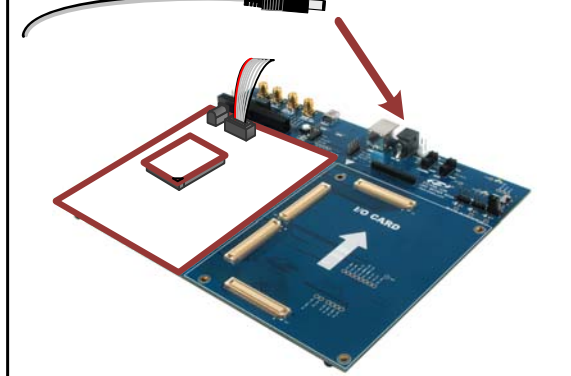
Connect the USB cable to the PC.



7

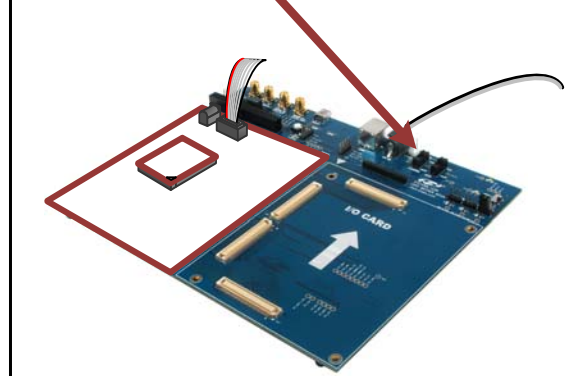
Connect the power supply to the UDP motherboard.

Note: The UDP motherboard includes several options for alternate power sources. See the UDP motherboard User's Guide at www.silabs.com/udp for details.



8

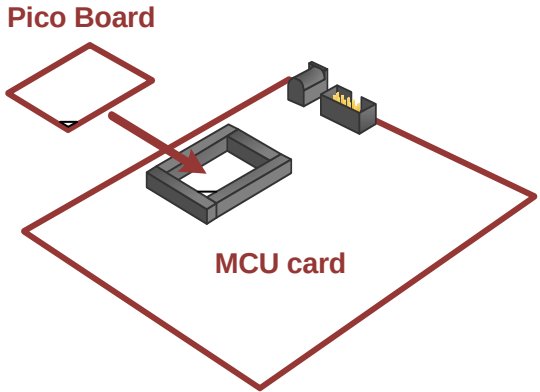
Move the motherboard power switch to the ON position.



Hardware Setup with the MCU Card Alone

1

If the kit includes a UPPI Pico Board, connect the Pico board to the MCU card. The white triangles on the boards should line up.

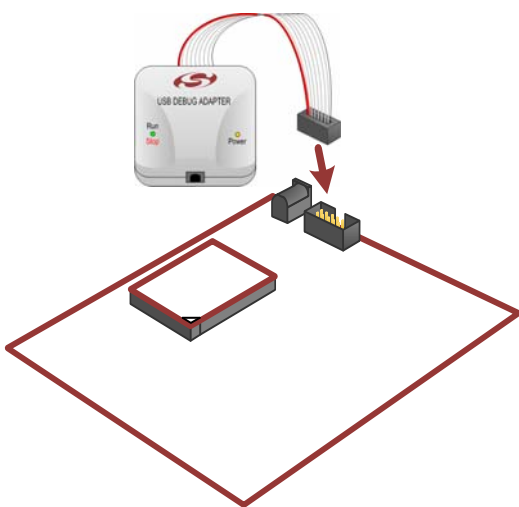


Pico Board

MCU card

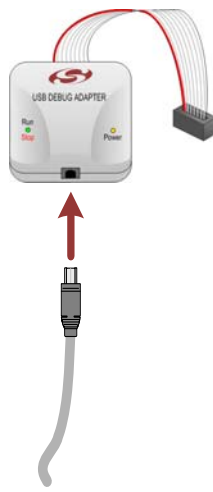
2

Connect the USB Debug Adapter ribbon cable to the MCU card.



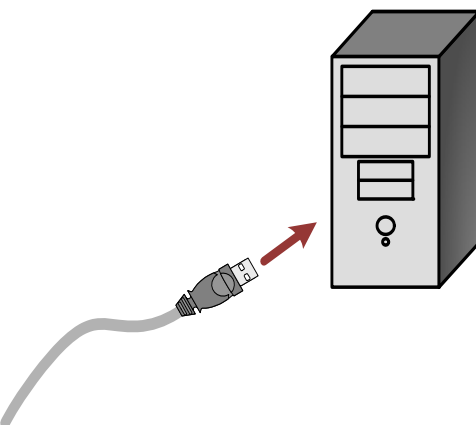
3

Connect a USB cable to the USB Debug Adapter.



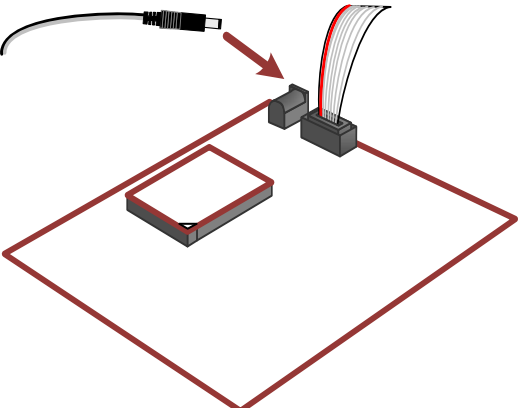
4

Connect the USB cable to the PC.



5

Connect the power supply to the MCU card.

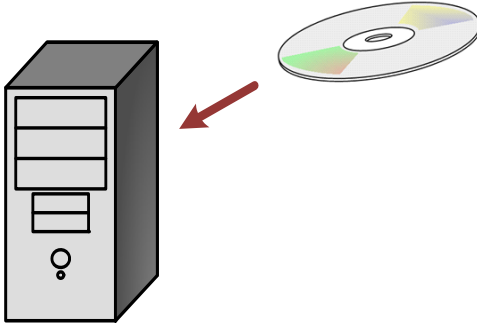


Note: Some MCU cards include options for alternate power sources. See the UDP MCU card User's Guide at www.silabs.com/udp for details.

Software Installation

1

Insert the UDP Development Kit CD in the PC's CD-ROM Drive.



2

Select "Install Development Tools" from the introduction window and follow the on-screen instructions.



Note: If autorun does not launch the introduction window, run "SETUP.EXE" directly from the CD.

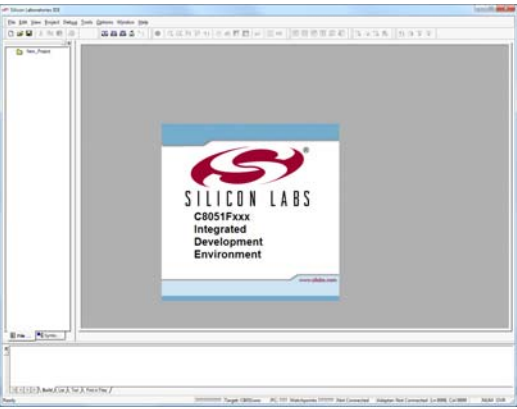
3

From the Programs list in the Start menu, select Silicon Laboratories and click on the Silicon Laboratories IDE logo.



4

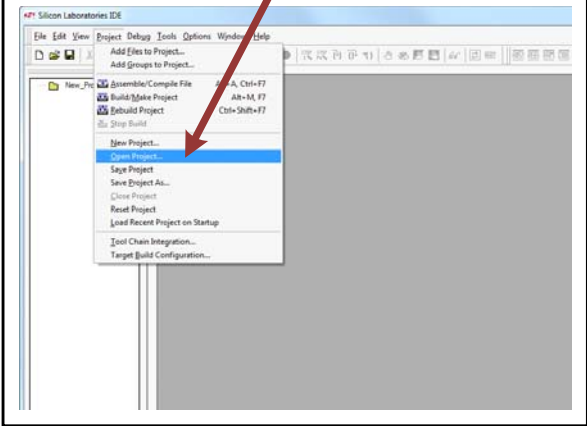
Silicon Laboratories IDE opens.



Using the Silicon Labs IDE

1

Open the project file
“<Family>_Blinky_C.wsp” located at
“C:\SiLabs\MCUExamples\<Family>\Blinky”



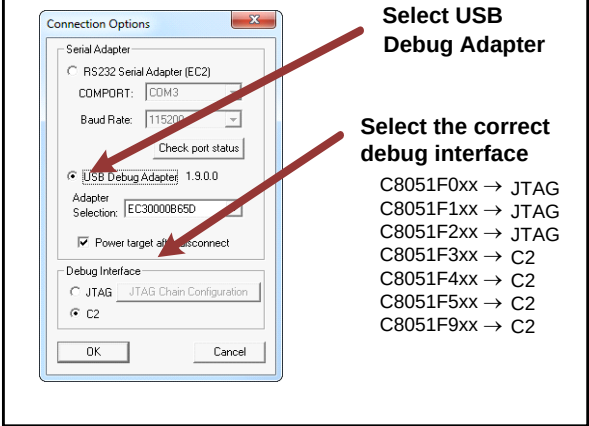
2

Select “Connection Options...”
from the “Options” Menu.

Select USB
Debug Adapter

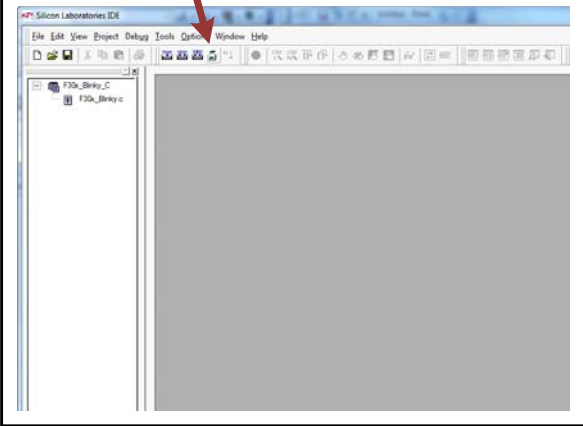
Select the correct
debug interface

C8051F0xx → JTAG
C8051F1xx → JTAG
C8051F2xx → JTAG
C8051F3xx → C2
C8051F4xx → C2
C8051F5xx → C2
C8051F9xx → C2



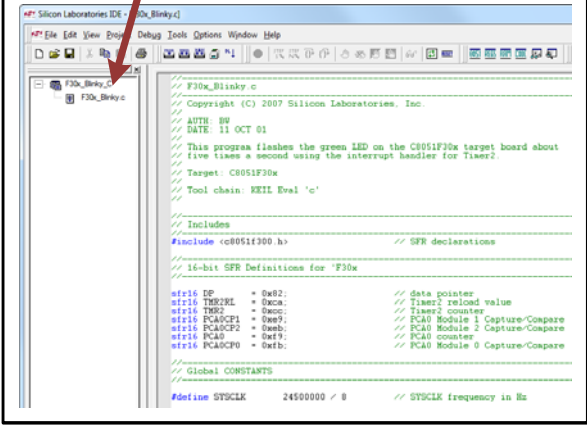
3

Connect to the target MCU.



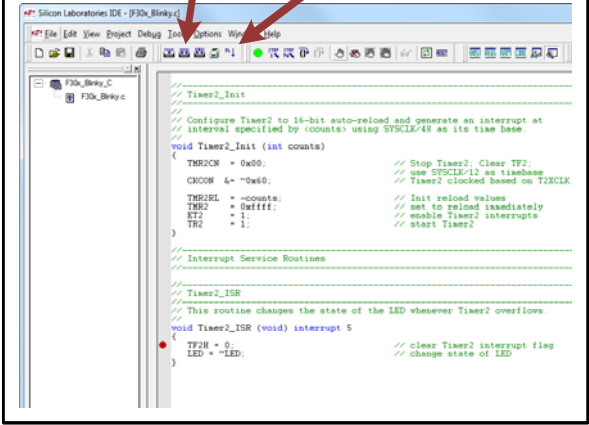
4

Click on “<Family>_Blinky.c” to
open source file.



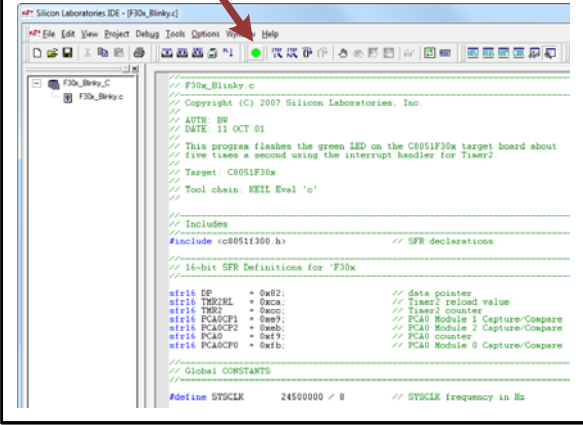
5

Build and Download the
program.



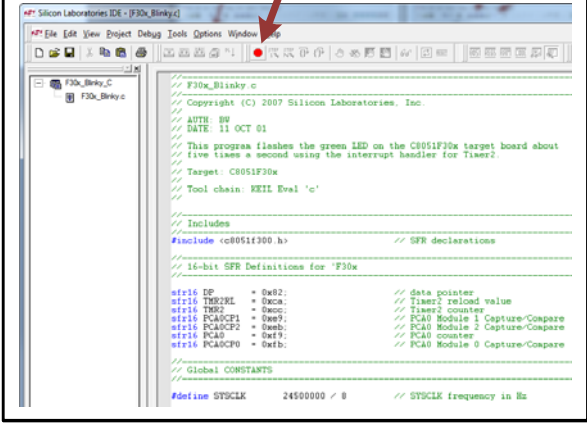
6

Execute the example program.
The green LED on the MCU card
flashes as the program runs.



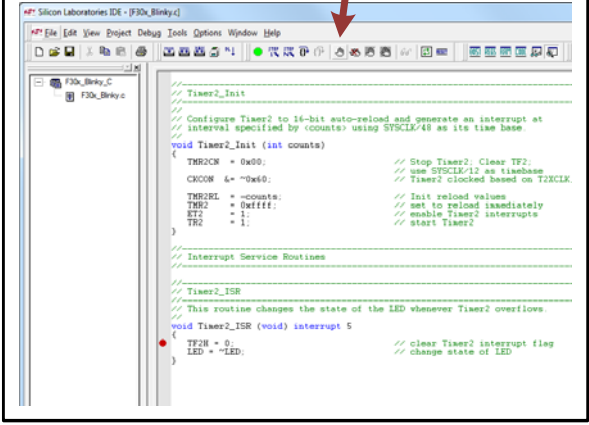
7

Stop execution of the
example program.



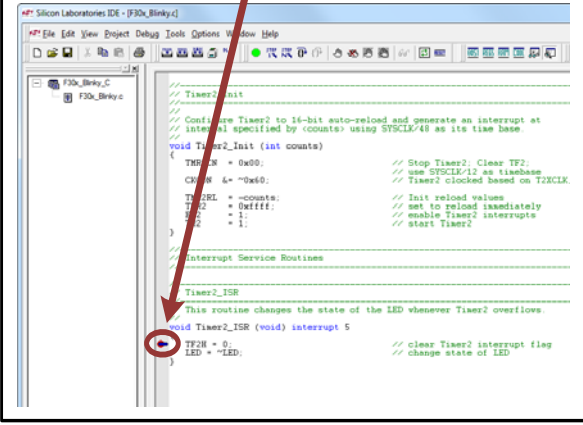
8

Set a breakpoint.



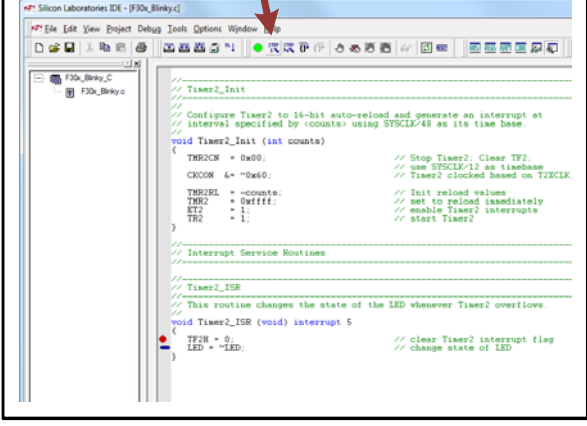
9

Execute the program.
The IDE will stop when it
encounters the breakpoint.



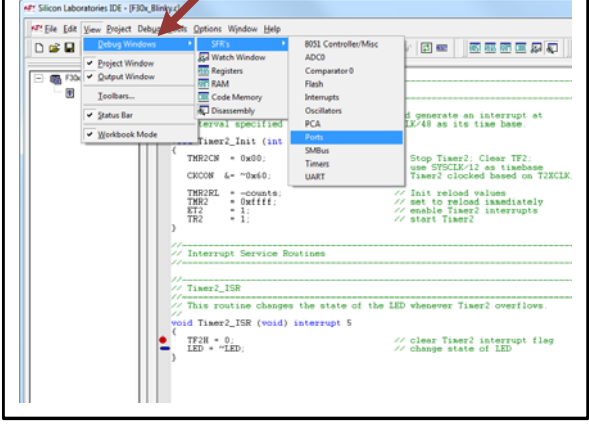
10

Step through the program.



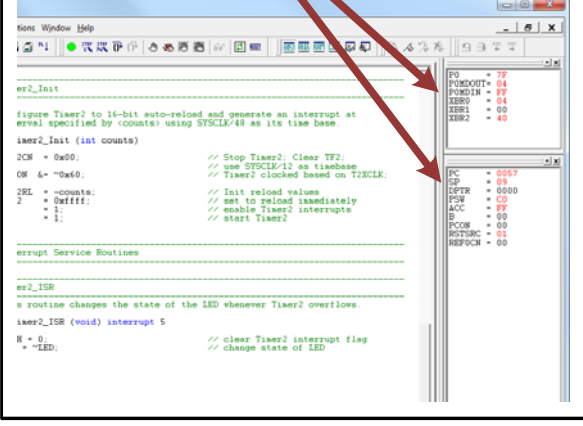
11

Open Debug windows.



12

View or modify Peripherals,
Registers, or Memory.



- If you are having trouble installing and/or using the development kit, please use the following support resources:
- UDP Motherboard, MCU card, Pico Board, and I/O card User's Guides (www.silabs.com/udp)
 - Application Note “AN104: Integrating Keil 8051 Tools Into the Silicon Labs IDE” (contains instructions for obtaining the 4 k limited version of the Keil toolset)
 - Latest versions of Application Notes can be found at www.silabs.com/products/microcontroller/applications.asp
 - MCU Knowledgebase (available at www.silabs.com → SUPPORT)
 - Contact an Applications Engineer using the online information request form (available at www.silabs.com → SUPPORT).