

Note: This Development Kit includes a **Product Serial Number** that expands the 2 KB code-limited evaluation version of the Keil tools to a full version with no code limit. Registration instructions can be found in the C8051F850DK User's Guide and in Application Note 104. This Keil tools upgrade process is not required to complete the steps listed in this document.

A. Install Software

1

Install the Silicon Labs 8-bit development software from the included CD-ROM. The latest software can also be downloaded from www.silabs.com/8bit-software

At a minimum, the C8051F850DK requires

- Silicon Labs IDE
- Configuration Wizard 2
- Keil C51 Tools
- CP210x Drivers

2

Open the Silicon Labs IDE and ensure it's using the installed tools by going to the Project → Tool Chain Integration menu. The Assembler (A51), Compiler (C51), and Linker (BL51) each have separate tabs.

B. Hardware Setup

1

Connect the USB Debug Adapter to the 10-pin debug connector (J23) on the MCU card using the 10-pin ribbon cable.

2

Connect the USB Debug Adapter to the PC using the standard USB cable.

3

Move the SW1 VDD Select switch to the top +3.3_VREG position.

4

Verify the JP2 Imeasure jumper is populated.

5

Verify the J27 jumpers are populated, connecting the LEDs, switches, and potentiometer to port pins.

6

Power the MCU card through the power connector (J6) using the supplied 9 V ac/dc adapter.

C. Documentation

1

Download the User's Guide for Each Board in the Development Kit.

Where to Find Documentation

C8051F85x/86x Information:
www.silabs.com/8bit-mcu→**Small Form Factor MCUs**→**C8051F85x/86x**
Hardware User's Guide:
www.silabs.com/8bit-mcu→**Development Tools**→**C8051F850DK**
OR www.silabs.com/udp
Application Notes:
www.silabs.com/8bit-mcu→**Application Notes**
Software:
www.silabs.com/8bit-software
Quality Documents:
www.silabs.com/quality

C8051F85x/86x MCU DEVELOPMENT KIT QUICK-START GUIDE
FEATURING THE UNIFIED DEVELOPMENT PLATFORM (UDP)

The C8051F85x/86x Development Kits come with an MCU card, USB Debug Adapter, and all necessary cables and power supplies needed to evaluate hardware and develop code.



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Mailing Address:
400 W. Cesar Chavez
Austin, TX 78701

D. Using the Silicon Labs IDE for the First Time

1

Open the project file F85x_Blinky_Keil.wsp in ...Examples\F85x_Blinky_86x1Blinky by going to Project → Open Project.

Note: The default installation path is C:\Silabs\MCU...

2

Go to Options → Connection Options... to select the debugging interface.

Select USB Debug Adapter

Select the C2 debug interface

3

Connect to the target MCU.

Note: If the IDE gives a notice that the debug adapter must be reprogrammed, press OK.

4

Click on F85x_Blinky.c in the Project window to open the source file, if it's not already open.

5

Build and Download the program.

6

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

7

Stop execution of the program.

9

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

11

Open register or code windows by going to View → Debug Windows.

8

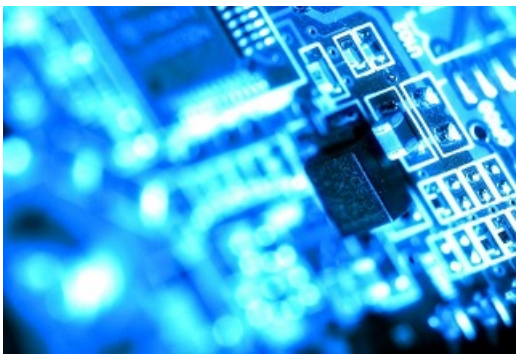
Set a breakpoint on any line of code.

10

Step through the program.

12

View or modify Peripherals, Registers, or Memory.



Application Notes:
www.silabs.com/bti-appnotes
MCU KnowledgeBase:
www.silabs.com → Support → Knowledge Base
User's Forums:
forum.silabs.com
Contact an Applications Engineer:
www.silabs.com → Support → Contact Technical Support