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.

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.

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.

8. Move the motherboard power switch to the ON position.

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.
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.

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.

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.

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.

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.

Note: If autorun does not launch the introduction window, run “SETUP.EXE” directly from the CD.
Using the Silicon Labs IDE

1. Open the project file "Family_Blinky_C.supp" located at "C:\SiliconLabs\UDP\Examples\Family\Blinky"

2. Select "Connection Options..." from the "Options" Menu.
   - Select USB Debug Adapter
   - Select the correct debug interface
     - USB1Rx → JTAG
     - USB1Tx → JTAG
     - USB1Rx → J2
     - USB1Rx → J2
     - USB1Rx → J2

3. Connect to the target MCU.

4. Click on "<family> Blinky" 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. Step 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).