SiMxxxxx Precision32™ MCU Development Kit Quick-Start Guide for Kits Featuring the Unified Development Platform (UDP)

Kit Contents

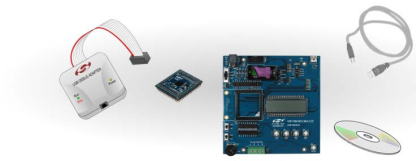
There are four varieties of general purpose UDP development kits. The content of these kits is listed below:

Development Kit

- UDP MCU card.
- Silicon Laboratories USB Debug Adapter.
- Supporting cables.
- SiMxxxxx DK Quick Start Guide (this document).

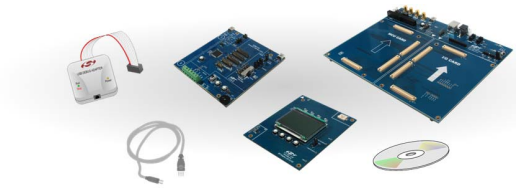
Development Kit with Pico Board

- UPPI Pico Board for the MCU.
- UDP MCU card.
- Silicon Laboratories USB Debug Adapter.
- Supporting cables.
- SiMxxxxx DK Quick Start Guide (this document).



Enhanced Development Kit

- UDP MCU card.
- UDP Motherboard.
- UDP I/O card(s).
- Silicon Laboratories USB Debug Adapter.
- Supporting cables.
- SiMxxxxx DK Quick Start Guide (this document).



Enhanced Development Kit with Pico Board

- UPPI Pico Board for the MCU.
- UDP MCU card.
- UDP Motherboard.
- UDP I/O card(s).
- Silicon Laboratories USB Debug Adapter.
- Supporting cables.
- SiMxxxxx DK Quick Start Guide (this document).

Download all Precision32™ 32-bit micrcontroller software, documentation, and resources at

www.silabs.com/32bit-mcu

www.silabs.com/32bit-software

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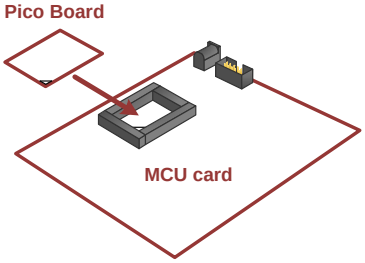
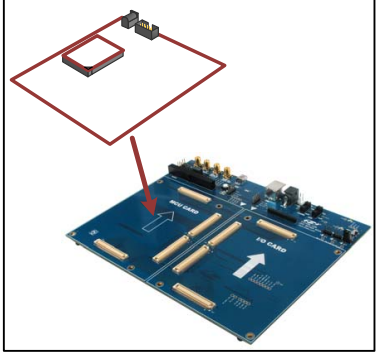
Rev. 0.1 2/12

Hardware Setup with the UDP Motherboard

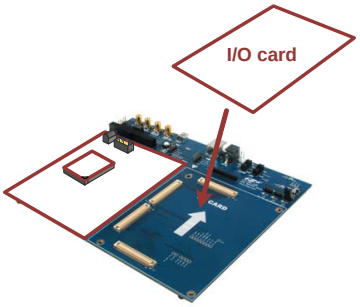
1 If the kit includes a UPPI Pico Board, connect the Pico board to the MCU card. Line up the white triangles on the boards.



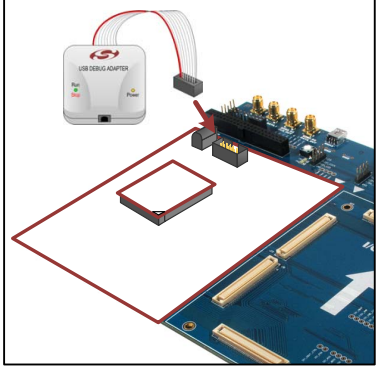
2 Connect the MCU card to the UDP motherboard.



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

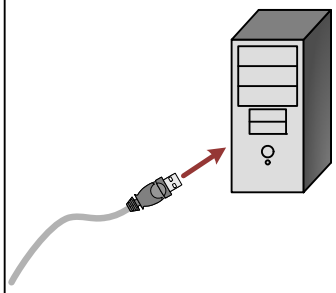


4 Connect the USB Debug Adapter ribbon cable to the MCU card.

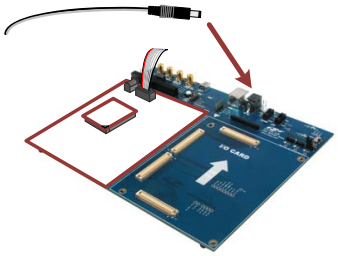


5 Connect a USB cable to the USB Debug Adapter.

6 Connect the USB cable to the PC.

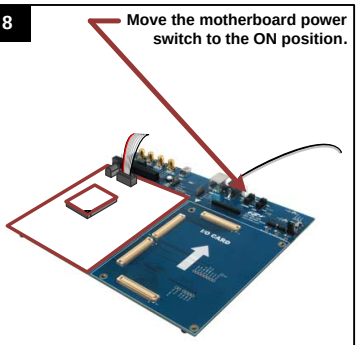


7 Connect the power supply to the UDP motherboard.

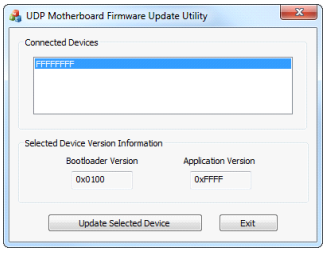


Note: The UDP motherboard includes several options for alternate power sources. See the UDP motherboard User's Guide at www.silabs.com/udp for details.

8 Move the motherboard power switch to the ON position.

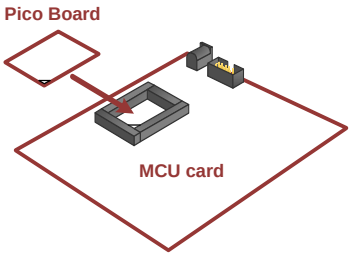


9 To ensure the motherboard supports the 32-bit products, update the motherboard firmware using the UDP Motherboard Firmware Update Utility available at www.silabs.com/udp.

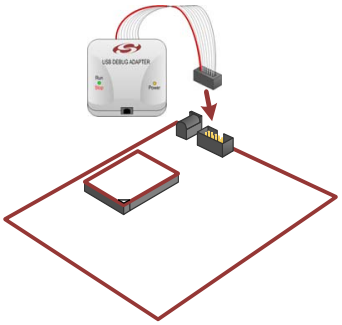


Hardware Setup with the MCU Card Alone

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.

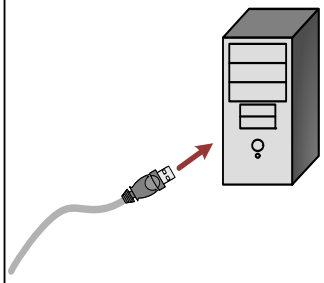


2 Connect the USB Debug Adapter ribbon cable to the MCU card.

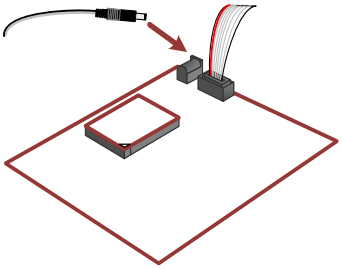


3 Connect a USB cable to the USB Debug Adapter.

4 Connect the USB cable to the PC.



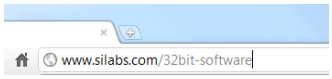
5 Connect the power supply to the MCU card.



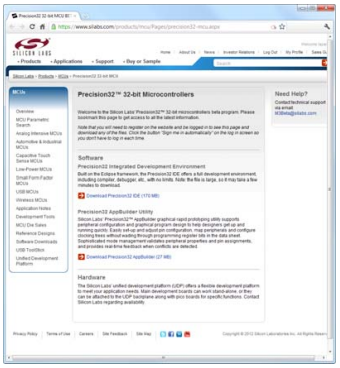
Note: Some MCU cards include options for alternate power sources. See the UDP MCU card User's Guide at www.silabs.com/udp for details.

Software Installation

1 Navigate to the Precision32 software download website: www.silabs.com/32bit-software

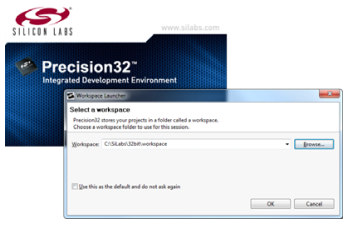


2 Download and install the Precision32 IDE and AppBuilder programs.

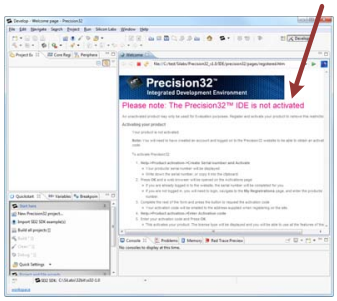


Using the Precision32 IDE

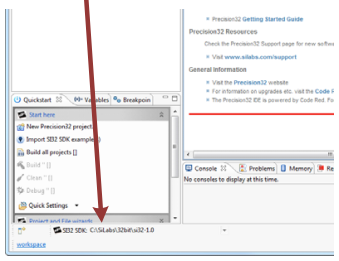
1 Open the Precision32 IDE and select the project workspace.



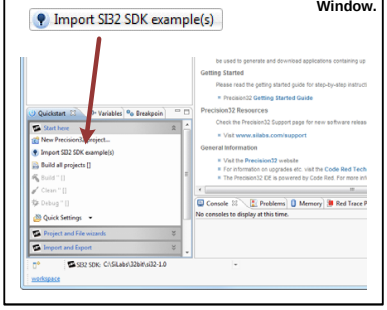
2 Register the IDE using the steps listed on the Welcome page.



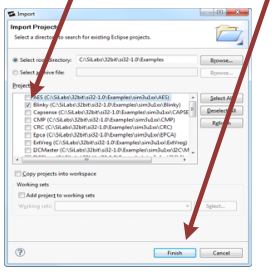
3 Select the Silicon Labs SDK path (C:\SiLabs\32bit\si32-x.y) using the drop-down menu at the bottom of the IDE.



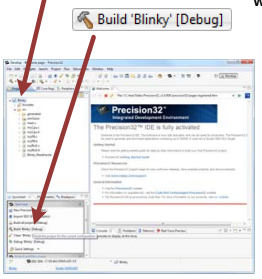
4 Select the Import SI32 SDK example(s) link in the Quickstart Window.



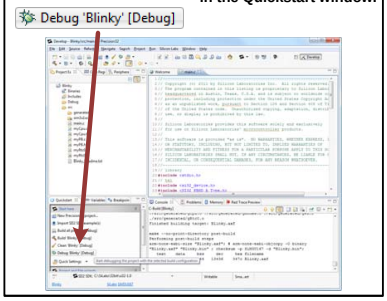
5 Select just the Blinky checkbox and press Finish.



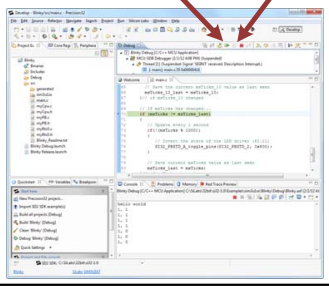
6 Select the Blinky project in the Project Explorer and press Build 'Blinky' [Debug] in the Quickstart window.



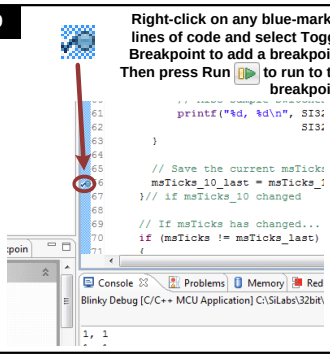
7 Start a Debug session by clicking Debug 'Blinky' [Debug] in the Quickstart window.



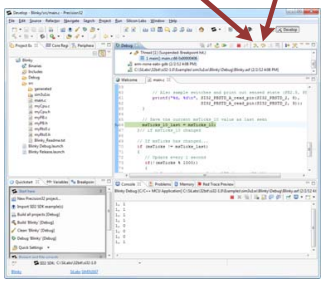
8 Run the program. The LED will blink. Stop the program.



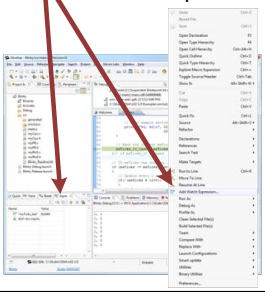
9 Right-click on any blue-marked lines of code and select Toggle Breakpoint to add a breakpoint. Then press Run to run to the breakpoint.



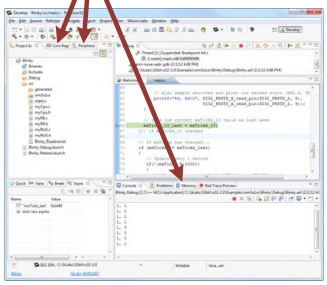
10 Step Into or Step Over code.



11 Right-click on a variable and select Add Watch Expression... to add it to the Expressions window.



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:

- All Precision32 software and resources are downloadable at www.silabs.com/32bit-mcu and www.silabs.com/32bit-software
- UDP Motherboard, MCU card, Pico Board, and I/O card User's Guides (www.silabs.com/udp)
- Application Note "AN667: Getting Started with the Silicon Labs Precision32 IDE" (contains instructions to register the Precision32 IDE)
- Latest versions of 32-bit Application Notes are available at www.silabs.com/32bit-mcu
- MCU Knowledgebase (available at www.silabs.com → SUPPORT)
- Contact an Applications Engineer using the online information request form (available at www.silabs.com → SUPPORT).