PRECISION32™ MCU DEVELOPMENT KIT QUICK-START GUIDE
FOR KITS FEATURING THE UNIFIED DEVELOPMENT PLATFORM (UDP)

The Precision32™ MCU Development Kits are available in a low cost Development Kit and a fully featured Enhanced Development Kit. Kit contents are described below. All development kits come with an MCU card, USB Debug Adapter, and all necessary cables and power supplies needed to evaluate hardware and develop code. The Enhanced Development Kits additionally contain a UDP Motherboard and one or more I/O cards to enhance the user experience.

Development Kit

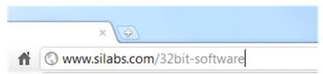
- UDP MCU card
- Silicon Laboratories USB Debug Adapter
- Supporting Cables and Power Supplies

Enhanced Development Kit

- UDP MCU card
- UDP Motherboard
- UDP I/O card(s)
- Silicon Laboratories USB Debug Adapter
- Supporting Cables and Power Supplies

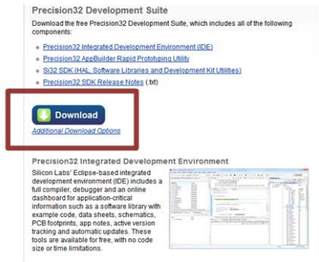
A. Install Software

1 Navigate to the Precision32 software download website.

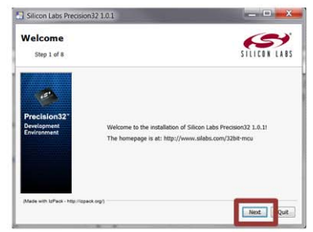


www.silabs.com/32bit-software

2 Click the large Download Button to initiate the Precision32 web install.

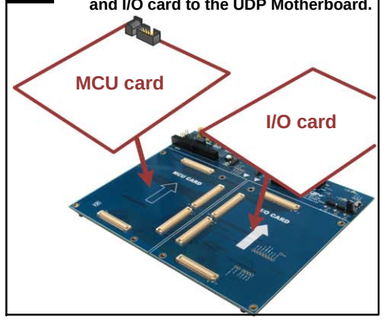


3 Start the Installer and allow it to run in the background. Advance to Step 4 while the Precision32 Development Suite and AppBuilder are being installed.

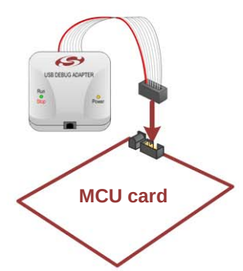


B. Hardware Setup (Steps 1, 4, and 5 Only Apply to Enhanced Development Kits)

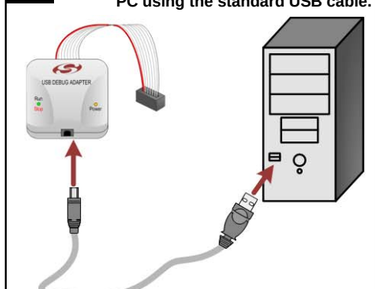
1 If Enhanced DK, connect the MCU card and I/O card to the UDP Motherboard.



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



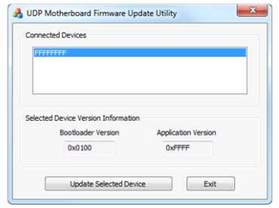
3 Connect the USB Debug Adapter to the PC using the standard USB cable.



4 If Enhanced DK, apply power to the UDP Motherboard using 1 of 4 power options, then set power switch (S3) to the ON Position.

Power Options
1: 9 V Universal Adapter (J20)
2: Standard USB (J16)
3: Mini USB (J1)
4: 6 V Battery Pack (J11)

5 If Enhanced DK, update the motherboard firmware using the UDP Motherboard Firmware Update Utility.



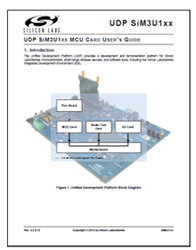
www.silabs.com/udp

6 If Development Kit, apply power to the MCU Card using 1 of 2 power options.

Power Options
1: Mini USB – For USB MCUs
2: 9 V Universal Adapter – For Non-USB MCUs
Note: If Enhanced DK, the MCU Card is powered from the motherboard.

C. Documentation

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



Where to Find Documentation

Data Sheet:
www.silabs.com/32bit-mcu→Choose Product Family→Documentation tab
Reference Manual:
www.silabs.com/32bit-mcu→Choose Product Family→Documentation tab
Hardware User's Guide:
www.silabs.com/32bit-mcu→Design Resources→Unified Development Platform
OR www.silabs.com/udp
Application Notes:
www.silabs.com/32bit-mcu→Design Resources→Application Notes
Software Development Kit Documentation:
C:\Silabs\32bit\si32-{revision}\Documentation\si32Hal.chm
Quality Documents:
www.silabs.com/quality

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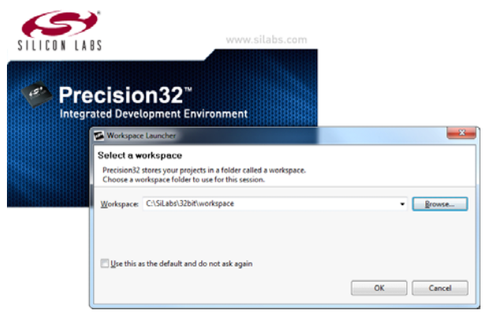
Mailing Address:
400 W. Cesar Chavez
Austin, TX 78701

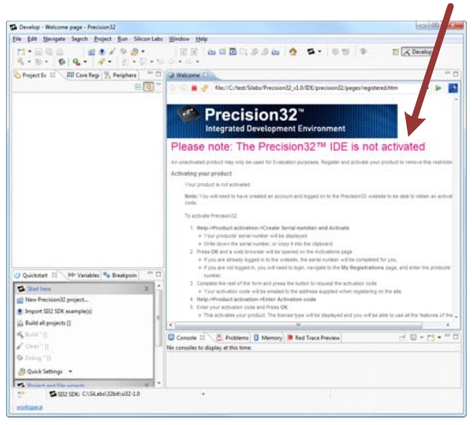
Rev. 0.2 7/12

D. Using the Precision32 IDE for the First Time

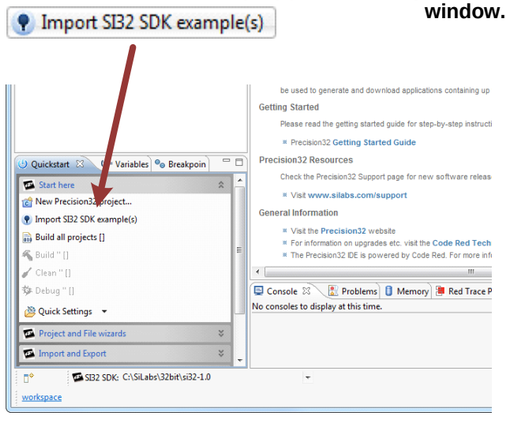
1 Open the Precision32 IDE and select the project workspace.



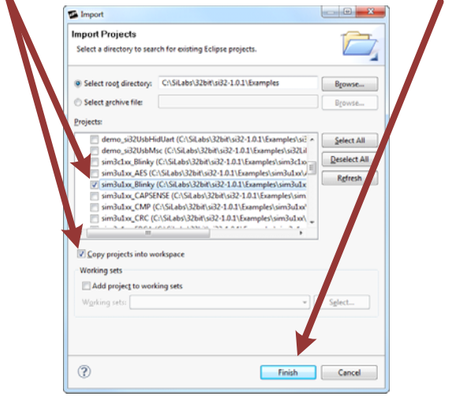
2 Register the IDE using the steps listed on the Welcome page.



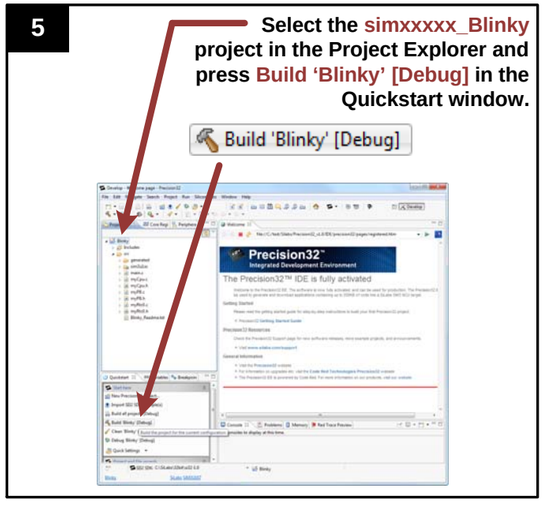
3 Select the Import SI32 SDK example(s) link in the Quickstart window.



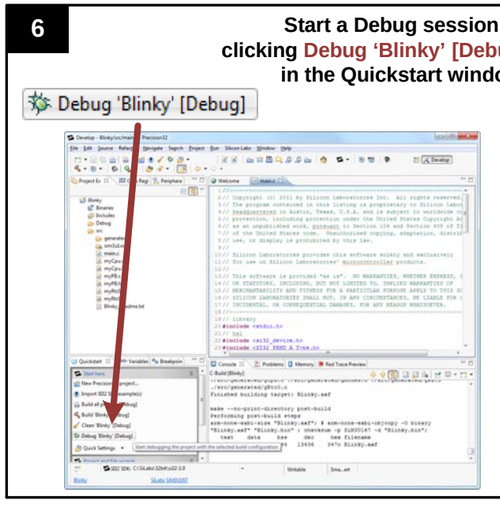
4 Select just the simxxxxx_Blinky checkbox, ensure Copy projects into workspace is selected, and press Finish.



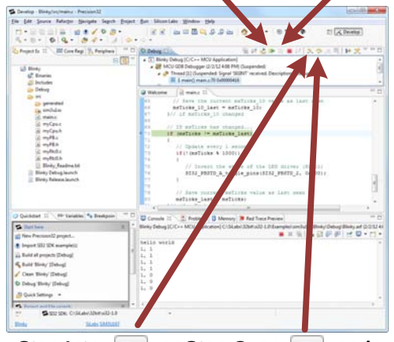
5 Select the simxxxxx_Blinky project in the Project Explorer and press Build 'Blinky' [Debug] in the Quickstart window.



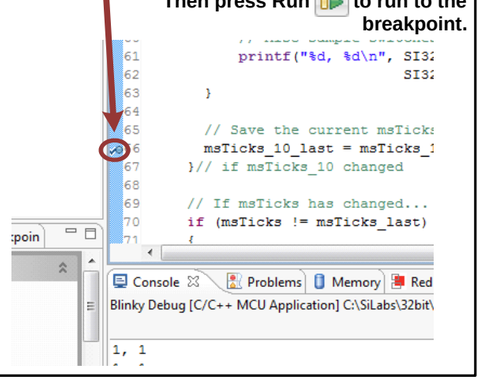
6 Start a Debug session by clicking Debug 'Blinky' [Debug] in the Quickstart window.



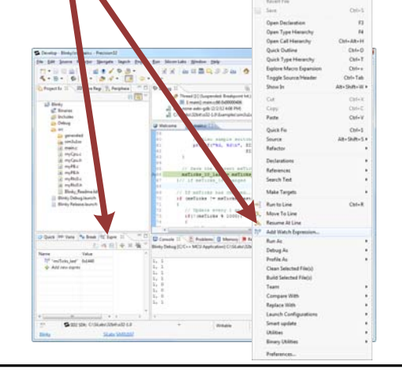
7 Run the program. The LED will blink. Pause the program. Step Into or Step Over code.



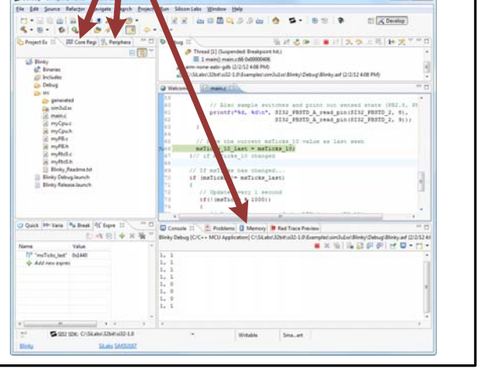
8 Right-click on any blue-marked lines of code and select Toggle Breakpoint to add a breakpoint. Then press Run to run to the breakpoint.



9 Highlight a variable, right-click on it, and select Add Watch Expression... to add it to the Expressions window.

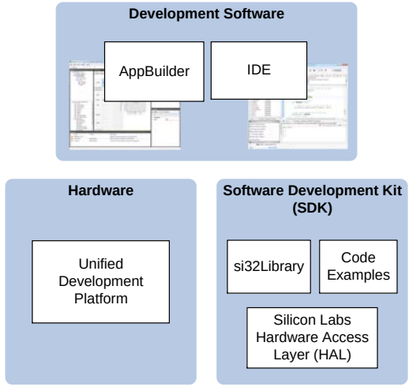


10 View or modify Peripherals, Registers, or Memory.



E. Using the Precision32 Development Suite

The Precision32 Development Suite is a complete development system for Silicon Labs 32-bit MCUs. The Development Suite consists of three parts: the Unified Development Platform (UDP) hardware, the Software Development Kit (SDK), and the PC development tools including AppBuilder and the Integrated Development Environment (IDE). See the application notes listed below for complete details.



- **AN675:** Precision32 Development Suite Overview
- **AN667:** Getting Started with the Silicon Labs Precision32 IDE
- **AN670:** Getting Started with the Silicon Labs Precision32 AppBuilder
- **AN678:** Precision32 si32FlashUtility Command-Line Programmer User's Guide
- **AN719:** Precision32 IDE and AppBuilder Detailed Tutorial and Walkthrough

Where to Find Support

MCU KnowledgeBase:
www.silabs.com→Support→Knowledge Base
Video Training Modules:
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Contact an Applications Engineer:
www.silabs.com→Support→Contact Technical Support