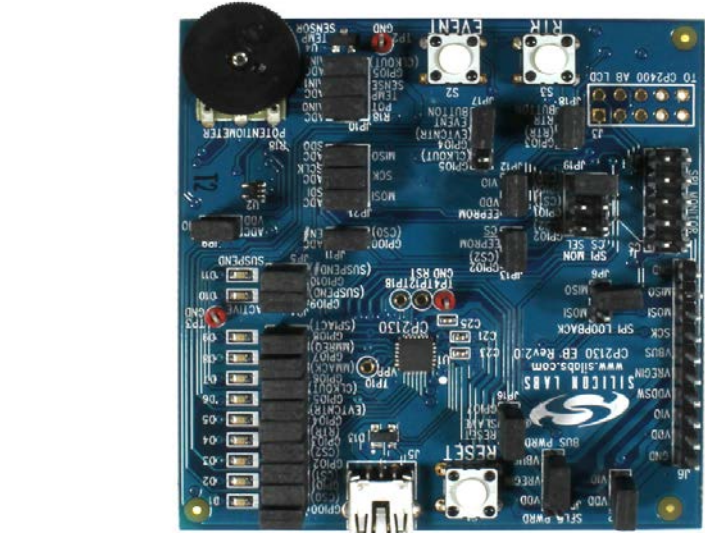




- Quick Start Guide (this document)
- CP21xx Installation DVD
- Mini-USB cable
- CP2130 evaluation board (pictured)

The CP2130 Evaluation Kit contains the following:

The CP2130 USB-to-SPI smart-interface family provides a simple solution for connecting Serial Peripheral Interface (SPI) based designs to USB using a minimum of components and PCB space. The CP2130 includes a USB 2.0 full-speed function controller, USB transceiver, internal USB oscillator, integrated voltage regulator, One-Time Programmable ROM, and one SPI.

CP2130 USB-TO-SPI EVALUATION KIT QUICK-START GUIDE



EVALUATION BOARD/KIT IMPORTANT NOTICE

Silicon Laboratories Inc. and its affiliated companies ("Silicon Labs") provides the enclosed evaluation board/kit to the user ("User") under the following conditions:

This evaluation board/kit ("EVB/Kit") is intended for use for ENGINEERING DEVELOPMENT, TESTING, DEMONSTRATION, OR EVALUATION PURPOSES ONLY and is not a finished end-product fit for general consumer use. ANY OTHER USE, RESALE, OR REDISTRIBUTION FOR ANY OTHER PURPOSE IS STRICTLY PROHIBITED. This EVB/Kit is not intended to be complete in terms of required design-, marketing-, and/or manufacturing-related protective considerations, including product safety and environmental measures typically found in end products that incorporate such semiconductor components or circuit boards. As such, persons handling this EVB/Kit must have electronics training and observe good engineering practice standards. As a prototype not available for commercial reasons, this EVB/Kit does not fall within the scope of the European Union directives regarding electromagnetic compatibility, restricted substances (RoHS), recycling (WEEE), FCC, CE or UL, and therefore may not meet the technical requirements of these directives or other related directives.

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User assumes all responsibility and liability for proper and safe handling of the EVB/Kit. Further, User indemnifies Silicon Labs from all claims arising from User's handling or use of the EVB/Kit. Due to the open construction of the EVB/Kit, it is User's responsibility to take any and all appropriate precautions with regard to electrostatic discharge.

EXCEPT TO THE EXTENT OF THE INDEMNITY SET FORTH ABOVE, NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

Neither Silicon Labs nor User is obligated to perform any activities or conduct any business as a consequence of using the EVB/Kit, and neither party is entitled to any form of exclusivity with respect to the EVB/Kit.

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Please read the User's Guide and, specifically, the Warnings and Restrictions notice in the User's Guide prior to handling the EVB/Kit. This notice contains important safety information about temperatures and voltages. For additional environmental and/or safety information, please contact a Silicon Labs application engineer or visit www.silabs.com/support/quality.

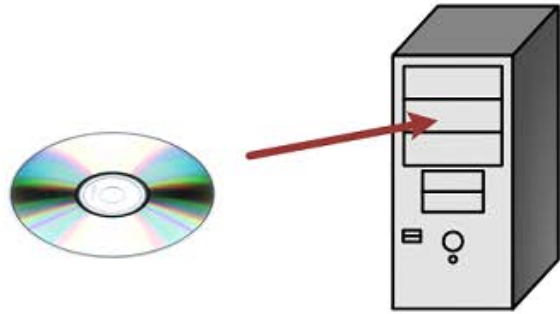
No license is granted under any patent right or other intellectual property right of Silicon Labs covering or relating to any machine, process, or combination in which the EVB/Kit or any of its components might be or are used.

User's use of this EVB/Kit is conditioned upon acceptance of the foregoing conditions. If User is unwilling to accept these conditions, User may request a refund and return the EVB/Kit to Silicon Labs in its original condition, unopened, with the original packaging and all documentation to:

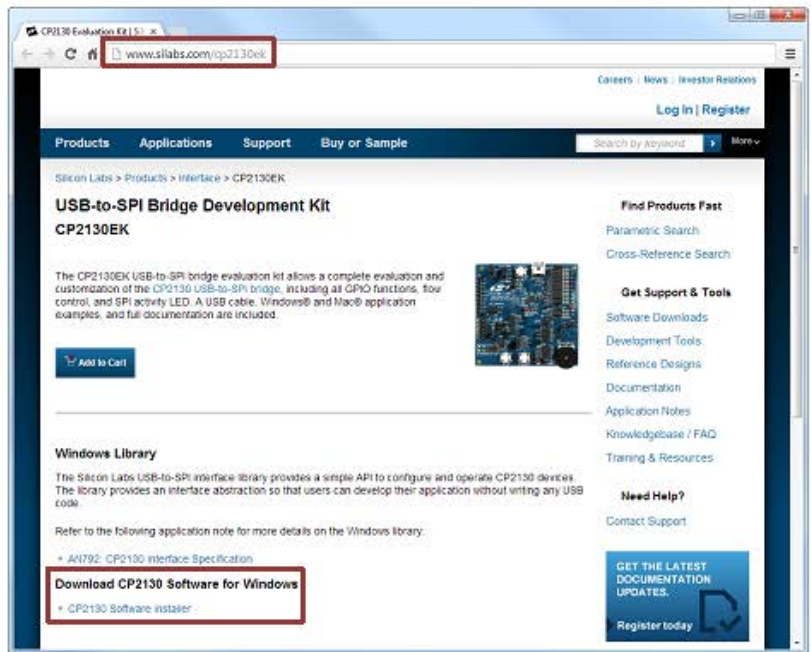
Mailing Address:
400 W. Cesar Chavez
Austin, TX 78701

A. Getting Started

- 1 Insert the DVD included in the kit to install the CP2130-related software. The latest version of this installer can also be downloaded from the web site by navigating to www.silabs.com/CP2130EK and clicking on the **Download** link for the appropriate operating system .

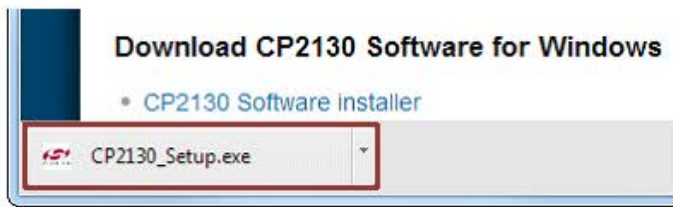


OR



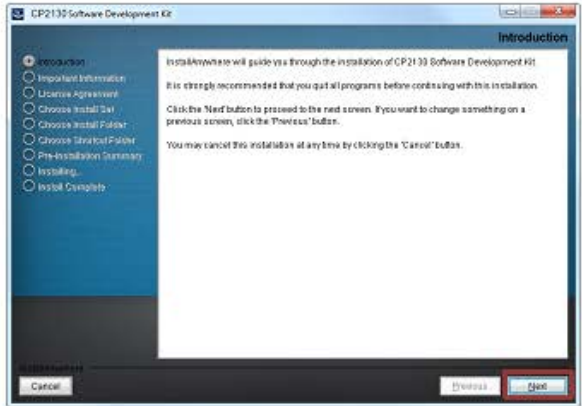
<http://www.silabs.com/CP2130EK>

- 2 Run **CP2130_Setup** from the download location. Inserting the DVD will automatically run the installer.



Note: Windows installation process shown.

- 3 Click on **Next**; accept the license agreement, and complete the installer steps. The installer may prompt you to restart the PC when installation completes.



4

Connect the CP2130 evaluation board to a PC as shown using the Mini-USB cable. The CP2130 evaluation board has an onboard EEPROM and 3-channel ADC as well as connections for an external SPI slave device.

5

The CP2130 device will appear as a "Silicon Labs USB Device" in Device Manager in Windows. The CP2130 can be accessed using the Microsoft WinUSB interface library. Silicon Labs provides a DLL with the CP2130 install package to simplify this process.

6

The green Active LED will turn on when the board is properly connected to the PC. After a few seconds of inactivity, the green Active LED may turn off, and the red Suspend LED will then turn on to indicate that the device has entered USB suspend mode. This is part of a power-saving feature called USB selective suspend.

7

Open the CP2130 Demo through the Start menu. The default installation directory for this software is C:\SiliconLabs\MCU\CP2130_SDK\Software\CP2130_Demo.

Start → Silicon Labs → CP2130 Software Development Kit → CP2130 Demo

B. Relevant Documentation

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In the CP2130_Demo application:

1. Press the **Connect** button to connect to the device
2. Rotate the potentiometer on the board and observe the **Potentiometer Voltage** gauge to read the ambient temperature from the temperature sensor
3. Observe the **Temperature Sensor** gauge to read the ambient temperature from the temperature sensor
4. Press the **Drive Low** and **Drive High** buttons to turn the GPIO.1 and GPIO.6 LEDs on and off
5. Type a string into the **SPI EEPROM R/W** write text box and press **Write**. Press **Read** to read the string back from the EEPROM.
6. Press the **Event** button on the board and observe the **Event Counter** value as it increases.
7. Press the **Plot ADC** button to open the ADC graph window to display a plot of the ADC channels.



Application Notes:

- AN721: CP21xx Device Customization Guide
- AN792: CP2130 Interface Specification

www.silabs.com/interface-appnotes

Device Information:

<http://www.silabs.com/smartinterface>

Data Sheets:

<http://www.silabs.com/smartinterface> → USB Connectivity Bridges → CP2130 → Documentation tab → Data Sheet section

Users Guides

<http://www.silabs.com/smartinterface> → USB Connectivity Bridges → CP2130 → Documentation tab → User Guides section

MCU Knowledge Base:

www.silabs.com → Support → Knowledge Base → USB Bridge Knowledge Base

Contact an Applications Engineer:

www.silabs.com → Support → Contact Technical Support

Quality Documents:

www.silabs.com/quality