C8051F970DK-QSG

C8051F970 Development Kit Quick Start Guide

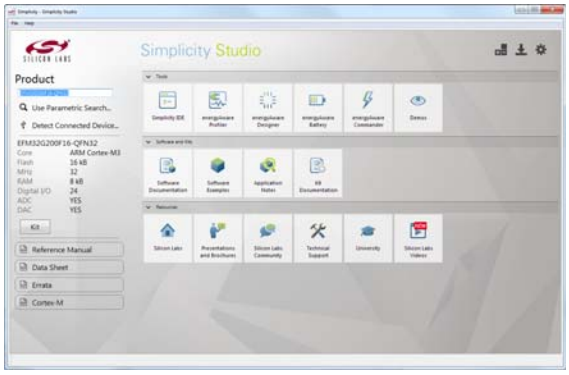
1. Getting Started

Step 1. Install Simplicity Studio

If it's not already installed, download and install Simplicity Studio from the Silicon Labs website. Simplicity Studio is a free software suite needed to start developing your application.

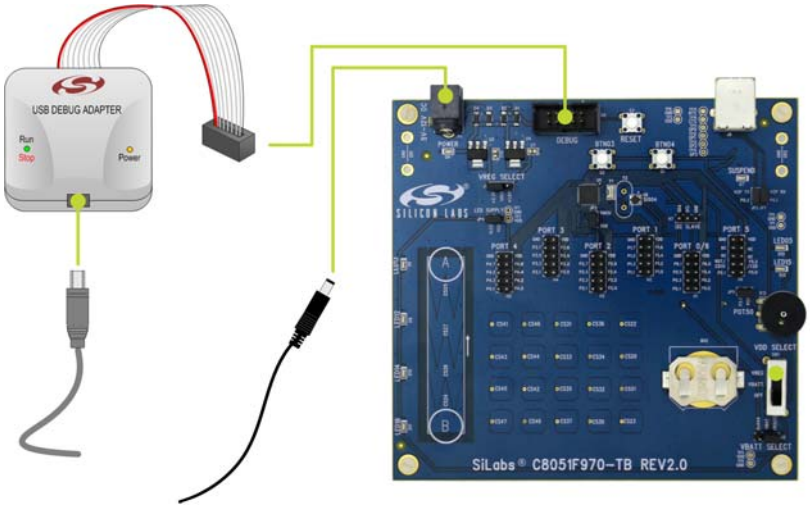
www.silabs.com/simplicity-studio

The CP210x VCP drivers must be installed to view the capacitive sensing data. Accept if Simplicity Studio opens a prompt to install the drivers.



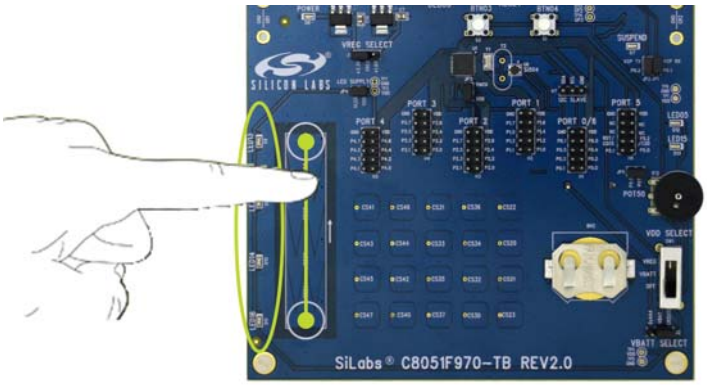
Step 2. Set Up Your Kit

Connect the USB Debug Adapter to the computer using one of the standard USB cables. Connect the 10-pin ribbon cable from the USB Debug Adapter to the DEBUG header (H8) on the development board and move the VDD Select switch (SW1) to the VREG position. Then, connect the power adapter to the 5–12 V DC (P1) connector on the development board.



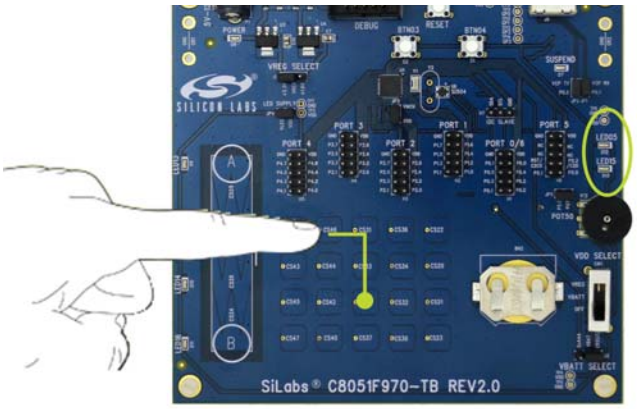
Step 3. Use the Capacitive Sensing Slider

Slide a finger along the capacitive sensing slider (picture). LED12, LED13, LED14, and LED16 will light up indicating the detected finger position on the slider.



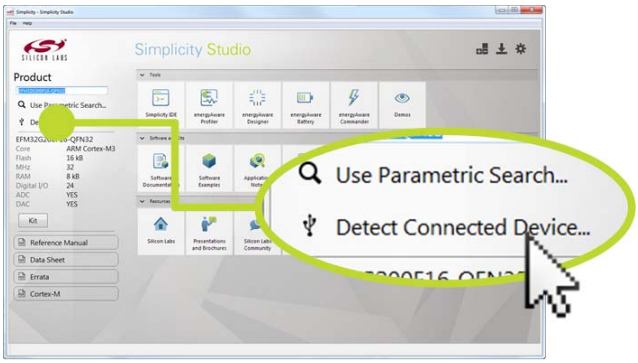
Step 4. Use the Capacitive Sensing Buttons

Place a finger on one of the buttons in the capacitive sensing array (picture). LED05 will indicate a single finger detected, and LED15 lights up when a second button is pressed concurrently.



Step 5. Detect Your Device

Once the kit is connected, open Simplicity Studio and click the “Detect Connected Device” button. This will verify that the installation was successful, identify the MCU on the kit hardware, and automatically configure the software tools for use with your device.



Step 6. View the Capacitive Sensing Data

The CP210x VCP drivers must be installed to view the capacitive sensing data. If not installed during the Simplicity Studio installation process, drivers may be installed manually by going to:

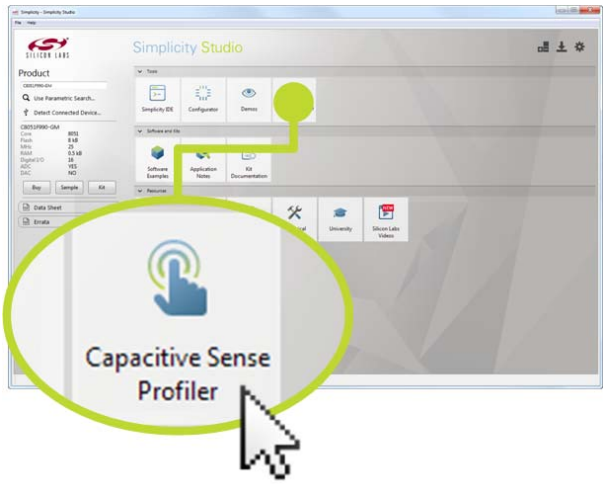
Help → Install Drivers → CP210x VCP

Or download and install from:

www.silabs.com/vcpdrivers

Connect a USB cable between the computer and the USB port on the development board (J9), and click the “Capacitive Sense Profiler” tile under Software in Simplicity Studio.

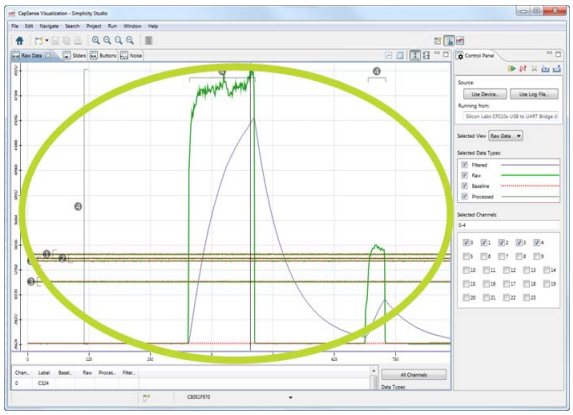
The application notes, “AN0828: Capacitive Sensing Library Overview and “AN0829: Capacitive Sensing Library Configuration Guide”, contain more information on how to use the capacitive sensing library and profiler tool. These documents can be accessed using the “Application Notes” tile.



Step 7. Touch and Visualize

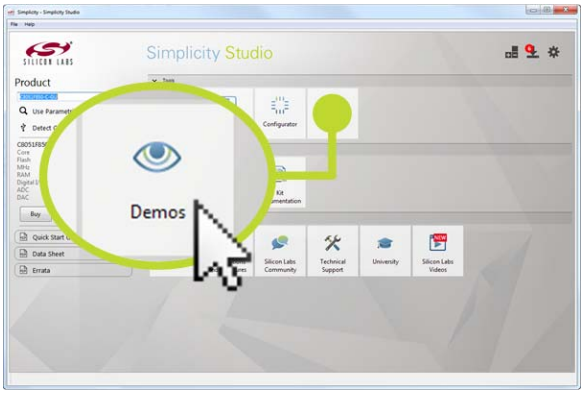
The Capacitive Sense Profiler indicates touches, raw and processed data, and noise information in a simple-to-use GUI.

Touch and release any of the capacitive sensing buttons on the board. The profiler will display the measured raw data delta, touch detection points, and baseline.



Step 8. Load New Demos in a Few Easy Steps

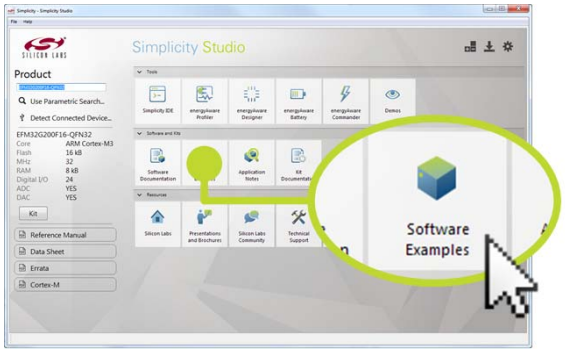
Load a new demo onto the board by clicking the Demos tile and selecting the desired demo from the list.



2. Resources

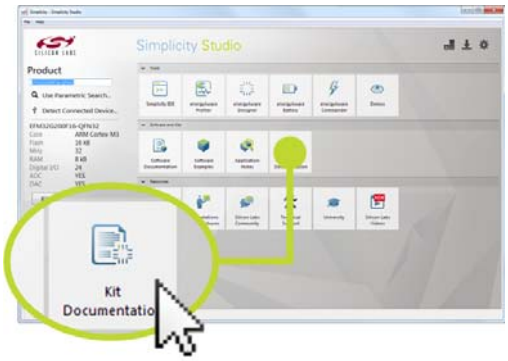
- **Software Examples**

Other software examples can be imported, compiled, and downloaded using the “Software Examples” tile.



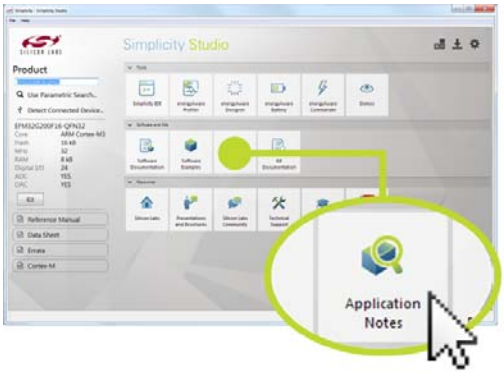
- **Kit Documentation and User’s Guide**

Kit documentation like the schematic and detailed board description can be found using the “Kit Documentation” tile.



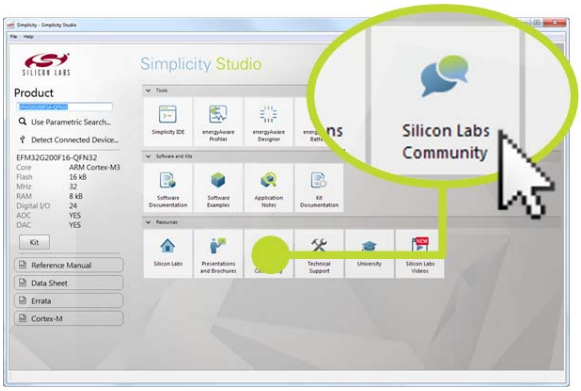
- **Capacitive Sense Profiler**

“AN0828: Capacitive Sensing Library Overview” and “AN0829: Capacitive Sensing Library Configuration Guide” contain more information on how to use the capacitive sensing library and visualization tool. These documents can be accessed using the “Application Notes” tile.



- **Community and Support**

Have a question? Visit the Silicon Labs community by clicking the “Community” tile.



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https://www.silabs.com/support/pages/contacttechnicalsupport.aspx
and register to submit a technical support request.

Patent Notice

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