



## **CY3280-BSM Universal CapSense™ Simple Button Module Kit Quick Start**

Doc. # 001-51789 Rev. \*A

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# 1. Kit Contents

Each CY3280-BSM Universal CapSense™ Simple Button Module Kit contains:

- CY3280-BSM Universal CapSense Module Board
- CY3280-BSM Universal CapSense Module Board CD/DVD
- CY3280-BSM Quick Start
- 3 mm Acrylic Overlay with adhesive
- 1.5 mm Acrylic Overlay with adhesive

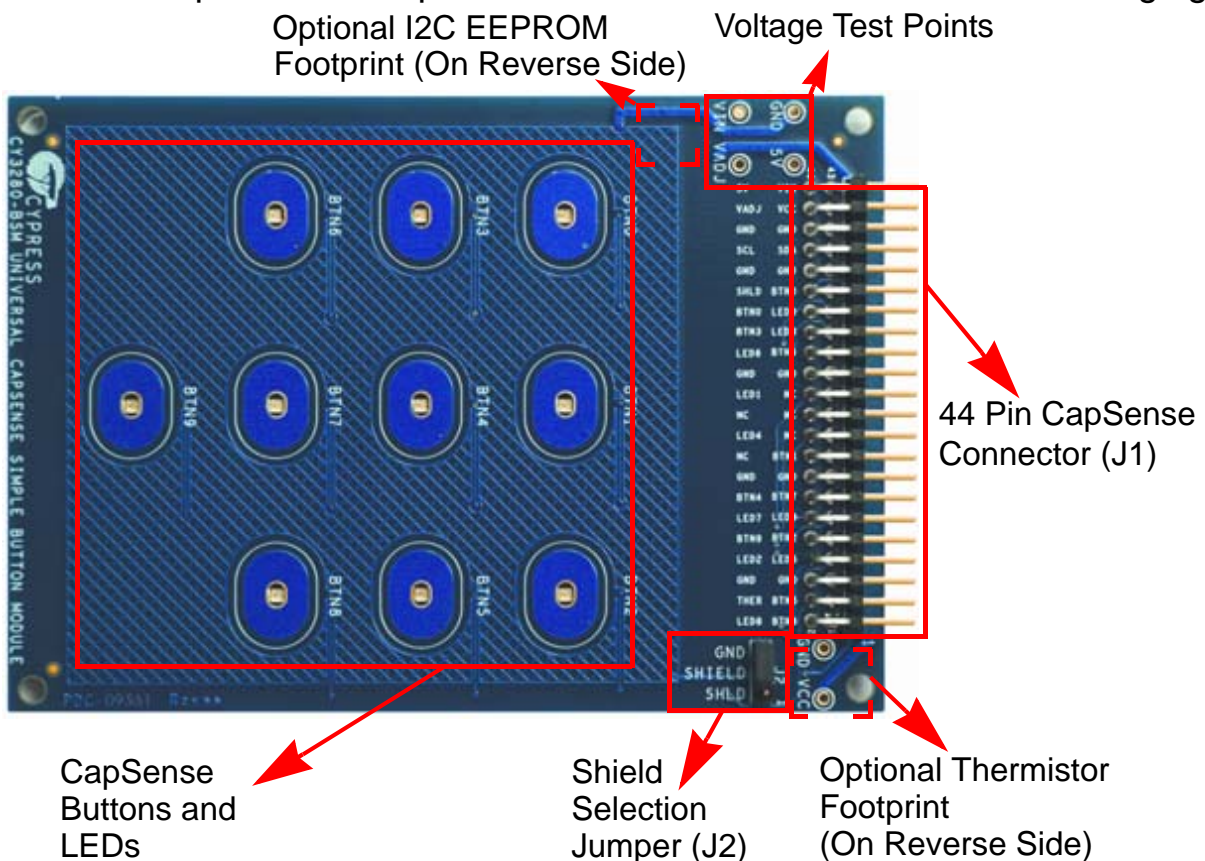
Universal CapSense Module boards are available for purchase separately, or as part of combination kits. Do visit [www.cypress.com/shop](http://www.cypress.com/shop) for more information.

Prerequisites:

- Universal CapSense Controller Board
- PSoC MiniProg
- I2CUSB Bridge
- USB Mini-B Cable

# 2. Module Hardware

This module is comprised of components and sensors detailed in the following figure.



The module consist of ten CapSense buttons and ten LEDs. These are interfaced to the CapSense controller board via 44 pin receptacle connector (J1). A three pin jumper (J2) is provided for selection between shield electrode and ground. The board also incorporates an optional I2C EEPROM and thermistor that are not populated by default.

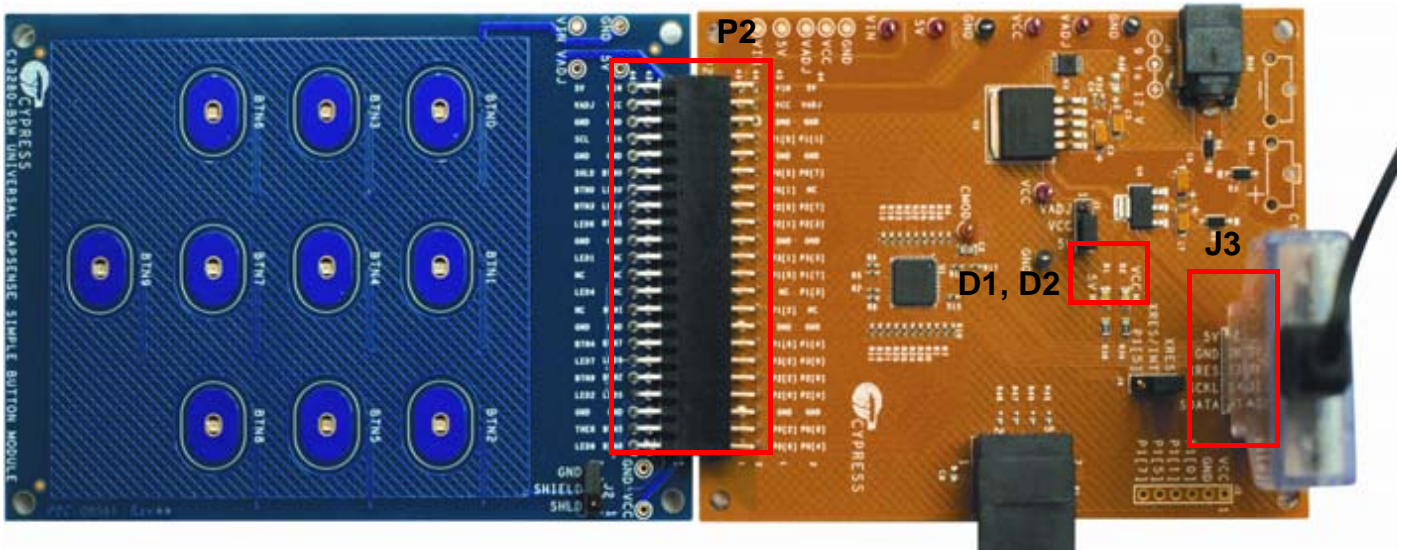
### 3. Getting Started

The CY3280-BSM board can be used with any of the UCC (Universal CapSense controller) boards. The example firmware is available on the CD/DVD. Insert the CY3280-BSM Kit CD/DVD into the CD/DVD drive of your PC, and follow the instructions on the screen to complete the installation.

### 4. Setup the Board

This section demonstrates the setup of CY3280-BSM with CY3280-20x34 Universal CapSense Controller. Similar procedure is used for all UCC boards.

- Connect the CY3280-BSM board to the CY3280-20x34 Universal CapSense Controller board's P2 receptacle connector.

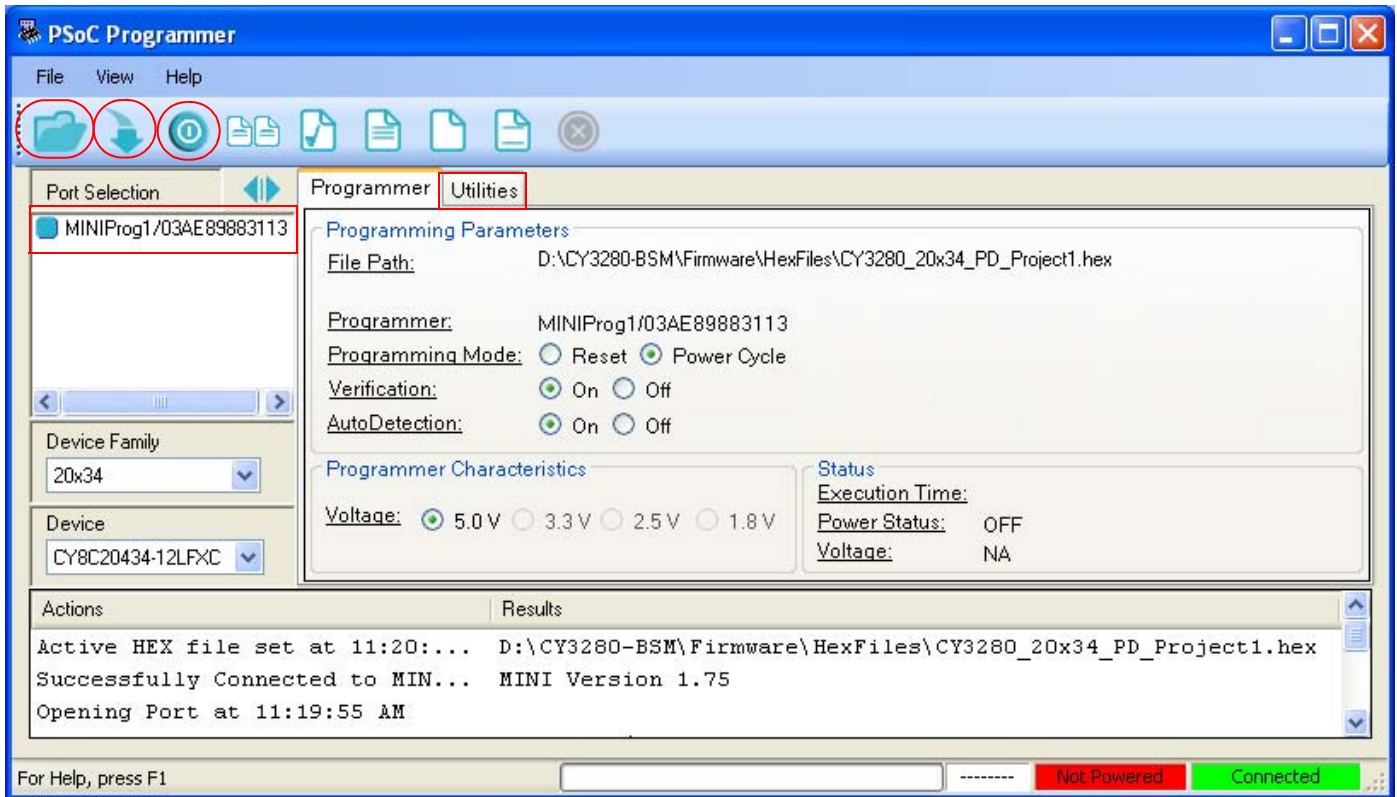


- In CY3280-20x34 UCC board place shunts on pins 2 and 3 of J1 and pins 1 and 2 of J4.
- In CY3280-BSM board place shunts on pins 2 and 3 of J2.
- Connect your computer to the CY3280-20x34 Universal CapSense Controller board's ISSP connector (J3) using a PSoC MiniProg and a USB cable.
- Open **PSoC Programmer** by going to **Windows Start > All Programs > Cypress > PSoC Programming 3.05 > PSoC Programmer**.
- Select MiniProg 1 from Port Selection view in the Programmer window.
- Message *Successfully Connected to MINIProg.....MINI Version 1.75* appears in the **Actions** pane.

**Note:** If MiniProg Version is older than 1.75, go to **Utilities** and click on **Update Firmware** icon.

- Confirm that the Programming Parameters are as shown in the figure on page 4.
- Click **File Load**, navigate to, and open the *CY3280\_20x34\_PD\_Project1.hex* file on CD/DVD at: *Firmware\HexFiles*
- Click the **Program** icon. After the programming is complete **Programming Succeeded** appears in the Actions pane.
- Click **Toggle Device Power** button. The Power LEDs D1, D2 on the CY3280-20x34 UCC board lights up. Corresponding LEDs on other UCC board's lights up.





## 5. Test the Board

- Touch a button with your finger. The corresponding LED on the module board lights up, indicating the button you are touching. Next touch the same buttons to turn off the LED. Multiple buttons can be touched at the same time.
- To monitor the CapSense parameters refer to readme file on CD/DVD at: *Firmware\20x34\_CSA\PSoC Designer\PD project1\Readme.pdf*

## 6. Design Support and Resources

A wealth of information about PSoC<sup>®</sup> Designer and CapSense<sup>™</sup> Best Practices is available on the [www.cypress.com](http://www.cypress.com) web site, and more is frequently added. For knowledge base articles, customer forums, and online application support, visit [www.cypress.com/go/support](http://www.cypress.com/go/support).

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