CY3280-20x66 Universal CapSense® Controller Kit Quick Start

Doc. # 001-53020 Rev. **

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1. Kit Contents

Each CY3280-20x66 Universal CapSense® Controller Kit contains:

- CY3280-20x66 Universal CapSense Controller Board
- CY3240-I2USB I2C Bridge Board
- CY3210 PSoC MiniProg1 Programmer
- CY3280-20x66 Quick Start
- CY3280-20x66 Universal CapSense Controller Kit CD
- Retractable USB Cable (A to mini-B)

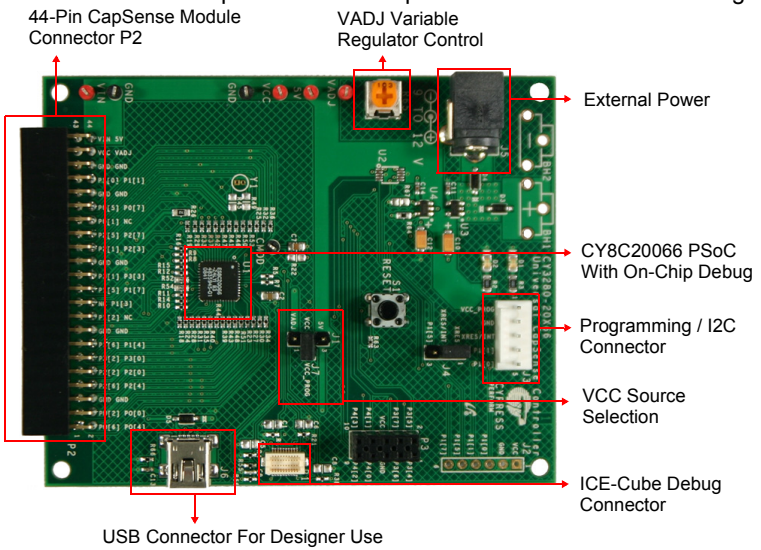
Universal CapSense Module boards are available for purchase separately, or as part of the combination kits. Visit www.cypress.com/shop for more information.

Prerequisites:

- CY3280 Universal CapSense Module Board
- CY3240-I2USB Bridge
- PSoC MiniProg1
- USB Mini-B Cable

2. Universal CapSense Controller Hardware

This controller board is comprised of the components detailed in the following figure.



Universal CapSense module boards can be interfaced to the CY3280-20x66 controller via the 44-pin receptacle (P2). Power can be supplied by an external DC adapter (use J5), a USB host (J6), a 9V battery (BH1/BH2), a Cypress ICE-Cube debugger (P1), a Cypress CY3240-I2USB bridge board (J3), or a Cypress MiniProg programmer (J3).

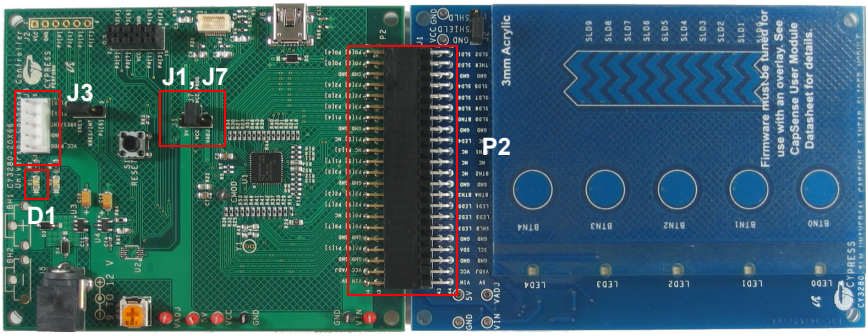
3. Getting Started

The CY3280-20x66 controller board can be used with any of the Universal CapSense module boards. The CY3280-20x66 controller board is factory programmed with firmware for use with the CY3280-SLM module board. The CY3280-SLM module consists of five CapSense buttons, one linear slider (with ten sensors), and five LEDs. Touching anywhere on the linear slider or buttons will result in the corresponding LED lighting up. The example firmware and source code are available on the kit CD. Insert the kit CD into the CD drive of your PC, and follow the instructions on the screen to complete installation.

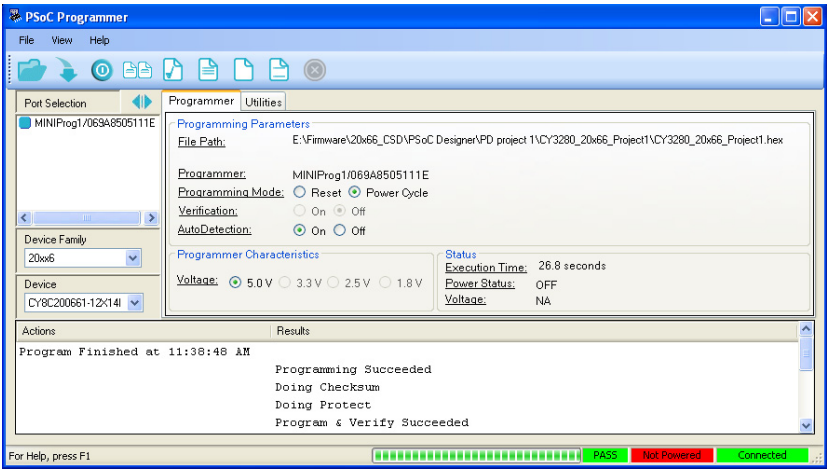
4. Hardware Setup

The example projects included on the kit CD demonstrate the use of the CY3280-SLM module board with the CY3280-20x66 Universal CapSense Controller. Similar procedures are used for all UCC boards.

- Connect J7 to pin 2 of J1with a jumper to allow power to be supplied by the MiniProg1 Programmer.
- Connect the CY3280-SLM board to the CY3280-20x66 Universal CapSense Controller board's P2 receptacle connector.



- Connect your computer to the CY3280-20x66 Universal CapSense Controller board's ISSP connector (J3) using a PSoC MiniProg1 and a USB cable.
- Open PSoC Programmer by going to **Windows Start > All Programs > Cypress > PSoC Programmer 3.05 > PSoC Programmer**.
- Select **MiniProg1** from **Port Selection** view in the **Programmer** window.
- Message *Successfully Connected to MINIProg…. MINI Version 1.75* appears in the Actions pane.
  Note: If MiniProg1 Version is older than 1.75, go to **Utilities** and click on **Update Firmware** icon.
- Confirm that the Programming Parameters settings are as shown in the figure on page 4.
- Click **File Load**, navigate to, and open the *CY3280_20x66_CSD_PD_Project1.hex* file on the CD at: *\Firmware\HexFiles*
- From the **Device Family** drop down, select **20x66**, and from the **Device** drop down, select **CY8C20666-24LTXI**.



- Click **Program**. After the programming is complete, **Programming Succeeded** appears in the Actions pane.
- Click **Toggle Device Power** button. The Power LED D1 on the CY3280-20x66 UCC board lights up.

5. Test the Board

- Touch the linear slider on the CY3280-SLM module board with your finger. The corresponding LEDs on the CY3280-SLM module board lights up.
- Touch a button with your finger. The corresponding LED on the CY3280-SLM module board lights up. Multiple buttons can be touched at the same time. The linear slider and buttons can also be used at the same time.
- For a more in-depth look at this sample project, including instructions on displaying the computed slider position in real-time, see the readme file on the CD at: *\Firmware\20x66_CSD\PSoC Designer\PD project1\Readme.pdf*

6. Design Support and Resources

A wealth of information about PSoC® Designer, and CapSense Best Practices are available on the 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.

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