

# I2C\_LCD\_Example Example Project

## 1.0

## Features

- Communicate on 2-wire I2C bus
- Support of NXP PCF2119x command format

## General Description

This example project demonstrates functionality on the I2C LCD component. In this example project the I2C LCD component is used to display a custom character set of the NXP PCF2119x compatible LCD module. It also demonstrates the example of usage of address macros and custom commands.

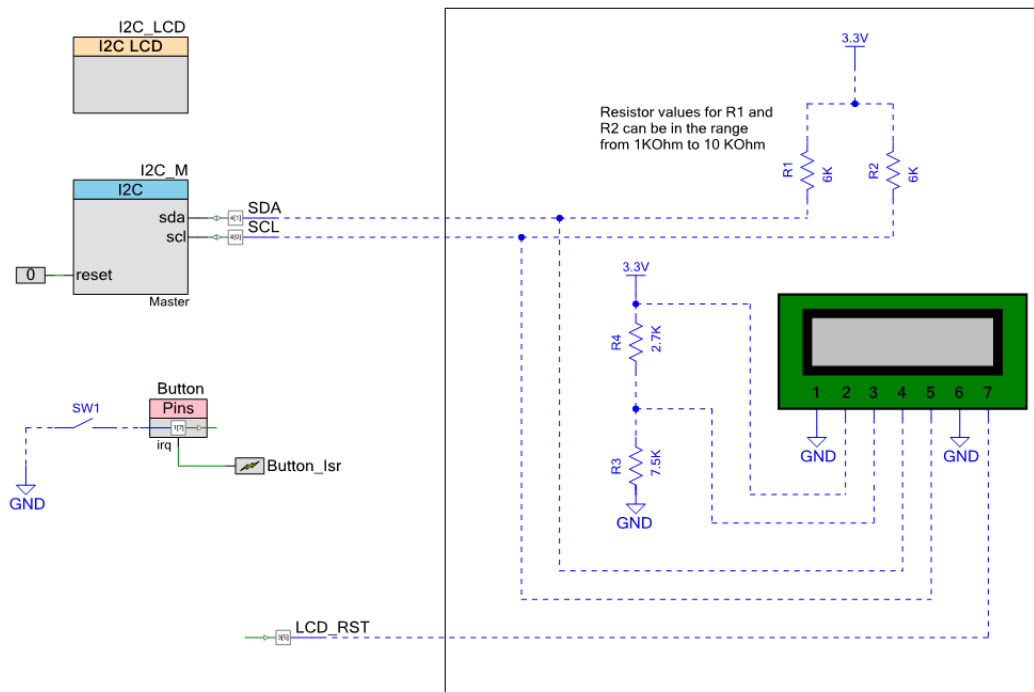
## Development Kit Configuration

This example project is designed to run on CY8CKIT-001 from Cypress Semiconductor. A full description of the kit, along with more example programs and ordering information, can be found at <http://www.cypress.com/go/cy8ckit-001>.

## Project Description

1. Make sure DVK CY8CKIT-001 is in its default configuration.
2. Connect R1-R4 resistors as it is shown on Figure 1.
3. Connect SDA pin and SCL pin to pin 4 and 5 of the LCD module.
4. Connect pins 1-3, 6 and 7 of LCD module as it is shown on Figure 1.
5. Connect button pin (P1[7]) with button SW1 on DVK CY8CKIT-001.
6. Build the project and program the hex file into the target device.
7. Wait and observe the two lines output of the custom character set.
8. Press the SW1 button of CY8CKIT-001 and observe the LCD output flip.
9. Press the button again and observe the LCD output get back to its normal state.

Figure 1. Example Project Design Schematic



## Expected Results

The expected result is printed strings on the LCD module, "CYPRESS!" in the first row and "Cypress!" in the second row. The displayed output is flipped top to bottom on the button press.

	Original strings	Flipped strings
First row	CYPRESS!	ɹ!ʇɹɹɹɹɹɹɹ
Second row	Cypress!	ɹ!ʇɹɹɹɹɹɹɹ



Cypress Semiconductor  
198 Champion Court  
San Jose, CA 95134-1709

Phone : 408-943-2600  
Fax : 408-943-4730  
Website : [www.cypress.com](http://www.cypress.com)

© Cypress Semiconductor Corporation, 2013-2014. The information contained herein is subject to change without notice. Cypress Semiconductor Corporation assumes no responsibility for the use of any circuitry other than circuitry embodied in a Cypress product. Nor does it convey or imply any license under patent or other rights. Cypress products are not warranted nor intended to be used for medical, life support, life saving, critical control or safety applications, unless pursuant to an express written agreement with Cypress. Furthermore, Cypress does not authorize its products for use as critical components in life-support systems where a malfunction or failure may reasonably be expected to result in significant injury to the user. The inclusion of Cypress products in life-support systems application implies that the manufacturer assumes all risk of such use and in doing so indemnifies Cypress against all charges. PSoC® is a registered trademark, and PSoC Creator™ and Programmable System-on-Chip™ are trademarks of Cypress Semiconductor Corp. All other trademarks or registered trademarks referenced herein are property of the respective corporations.

This Source Code (software and/or firmware) is owned by Cypress Semiconductor Corporation (Cypress) and is protected by and subject to worldwide patent protection (United States and foreign), United States copyright laws and international treaty provisions. Cypress hereby grants to licensee a personal, non-exclusive, non-transferable license to copy, use, modify, create derivative works of, and compile the Cypress Source Code and derivative works for the sole purpose of creating custom software and or firmware in support of licensee product to be used only in conjunction with a Cypress integrated circuit as specified in the applicable agreement. Any reproduction, modification, translation, compilation, or representation of this Source Code except as specified above is prohibited without the express written permission of Cypress.

Disclaimer: CYPRESS MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH REGARD TO THIS MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Cypress reserves the right to make changes without further notice to the materials described herein. Cypress does not assume any liability arising out of the application or use of any product or circuit described herein. Cypress does not authorize its products for use as critical components in life-support systems where a malfunction or failure may reasonably be expected to result in significant injury to the user. The inclusion of Cypress' product in a life-support systems application implies that the manufacturer assumes all risk of such use and in doing so indemnifies Cypress against all charges.

Use may be limited by and subject to the applicable Cypress software license agreement.

