

# Serial Peripheral Interface Code Example

## Objective

This example project demonstrates SPI (Serial Peripheral Interface) communication between SPI Master and SPI Slave components in SPI Mode (CPHA == 0, CPOL == 0) using 8-byte Tx and Rx software buffers with 1 Mbps bit rate.

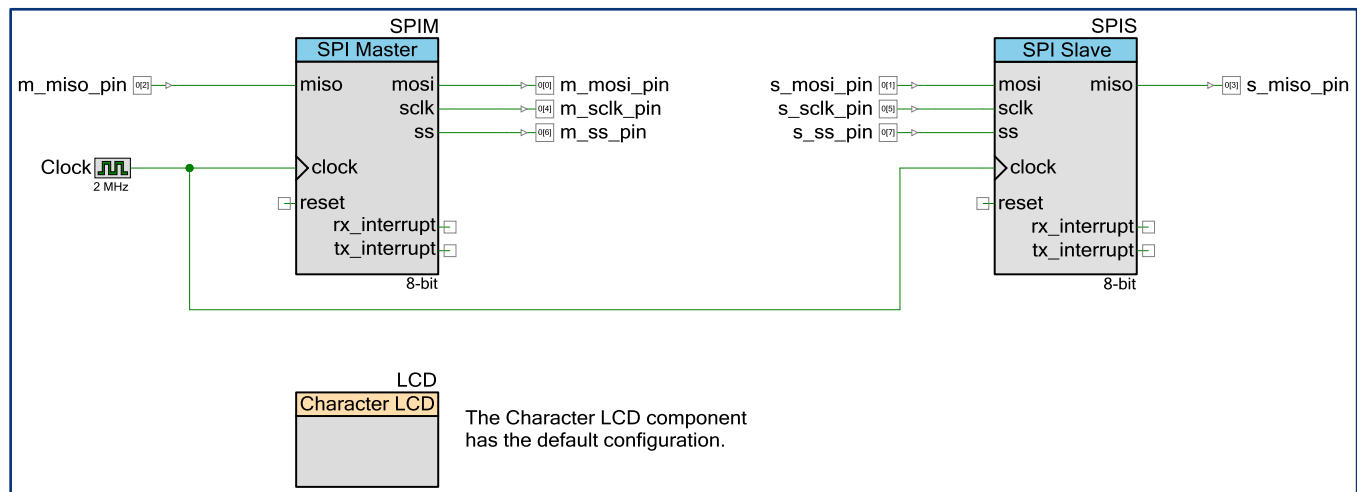
This example is written for the CY8CKIT-001 development kit.

See the schematic for more information.

## Procedure

1. This project is written for a 2X16 LCD display such as the one available on Cypress development kit, CY8CKIT-001.
2. The CY8CKIT-001 board should have the LCD power jumper (J12) set.
3. Connect the appropriate pins (m\_miso to s\_miso, m\_mosi to s\_mosi, m\_sclk to s\_sclk, m\_ss to s\_ss).
4. Build the project and program the hex file on to target device using the MiniProg3.
5. Power cycle the device and observe the results on the LCD.

## Schematic



## PSoC Resources

Cypress provides a wealth of data at [www.cypress.com](http://www.cypress.com) to help you to select the right PSoC device for your design, and quickly and effectively integrate the device into your design. For a comprehensive list of resources, see [KBA86521](#), [How to Design with PSoC 3](#), [PSoC 4](#), and [PSoC 5LP](#). The following is an abbreviated list for PSoC:

- **Overview:** [PSoC Portfolio](#), [PSoC Roadmap](#)
- **Product Selectors:** [PSoC 1](#), [PSoC 3](#), [PSoC 4](#), or [PSoC 5LP](#). In addition, [PSoC Creator](#) includes a device selection tool.
- **Datasheets:** Describe and provide electrical specifications for the PSoC 3, PSoC 4, and PSoC 5LP device families.
- **CapSense Design Guides:** Learn how to design capacitive touch-sensing applications with the PSoC 3, PSoC 4, and PSoC 5LP families of devices.
- **Application Notes** and **Code Examples:** Cover a broad range of topics, from basic to advanced level. Many of the application notes include code examples.
- **Technical Reference Manuals (TRM):** Provide detailed descriptions of the architecture and registers in each of the PSoC 3, PSoC 4, and PSoC 5LP device families.
- **PSoC Training Videos:** These videos provide step-by-step instructions on getting started building complex designs with PSoC.
- **Development Kits:**
  - [CY8CKIT-042](#) and [CY8CKIT-040](#), PSoC 4 Pioneer kits, are easy-to-use and inexpensive development platforms. These kits include connectors for Arduino™ compatible shields and Digilent® Pmod™ daughter cards.
  - [CY8CKIT-049](#) is a series of very low-cost prototyping platform for sampling PSoC 4 devices.
  - [CY8CKIT-030](#) and [CY8CKIT-050](#) are designed for analog performance. They enable you to evaluate, develop, and prototype high-precision analog, low-power, and low-voltage applications powered by PSoC 3 and PSoC 5LP, respectively.
  - [CY8CKIT-001](#) is a common development platform for all PSoC family devices.
- The [MiniProg3](#) device provides an interface for flash programming and debug.

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