**SPI LCD Panel Configuration and Setup**

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The SPI-LCD (Serial Peripheral Interface Liquid Crystal Display) is used in lieu of the serial LCD panel in order to free up an additional serial port when needed to communicate with other peripheral devices. It is physically a direct replacement for the serial display, however, the Serial.print commands cannot be used with this display.

**Firmware**

The SPI-LCD library must be installed and the header file must be included at the top of the program:

**#include <LCD2X16.h>**

You need to create an instance of the LCD object outside of any functions:

**LCD2x16 lcd;**

The name ‘lcd’ is arbitrary. The examples assume ‘lcd’ is used as the object’s name.

In ‘setup()’ initialize the driver:

**lcd.begin();**

This will locate which SPI connector the board is connected to.

The following functions are available:

**uint8\_t csPin = lcd.getID();**

Returns the number of the chip select pin for the display. This will depend on which SPI port the display is plugged into. There is generally no need to use this function.

**lcd.setBacklight(uint8\_t level);**

Set the backlight level. ‘level’ should be between 0 and 8.

**lcd.cls();**

Clear the display.

**lcd.write(char \* string);**

Write the character string ‘string’ to the display at the current cursor location.

**lcd.setPosition(uint8\_t row, uint8\_t col);**

Set the cursor to row ‘row’ and column ‘col’ – the top row is 0 and the left-most column is 0.

**lcd.wrbyte(char c);**

Send a single byte to the LCD. This can be used to send other display commands, such as setting special characters. See the NHD‐0216K3Z‐FL‐GBW‐V3 data sheet for details.