



## SparkFun 16x2 SerLCD - Black on RGB 3.3V

LCD-14072

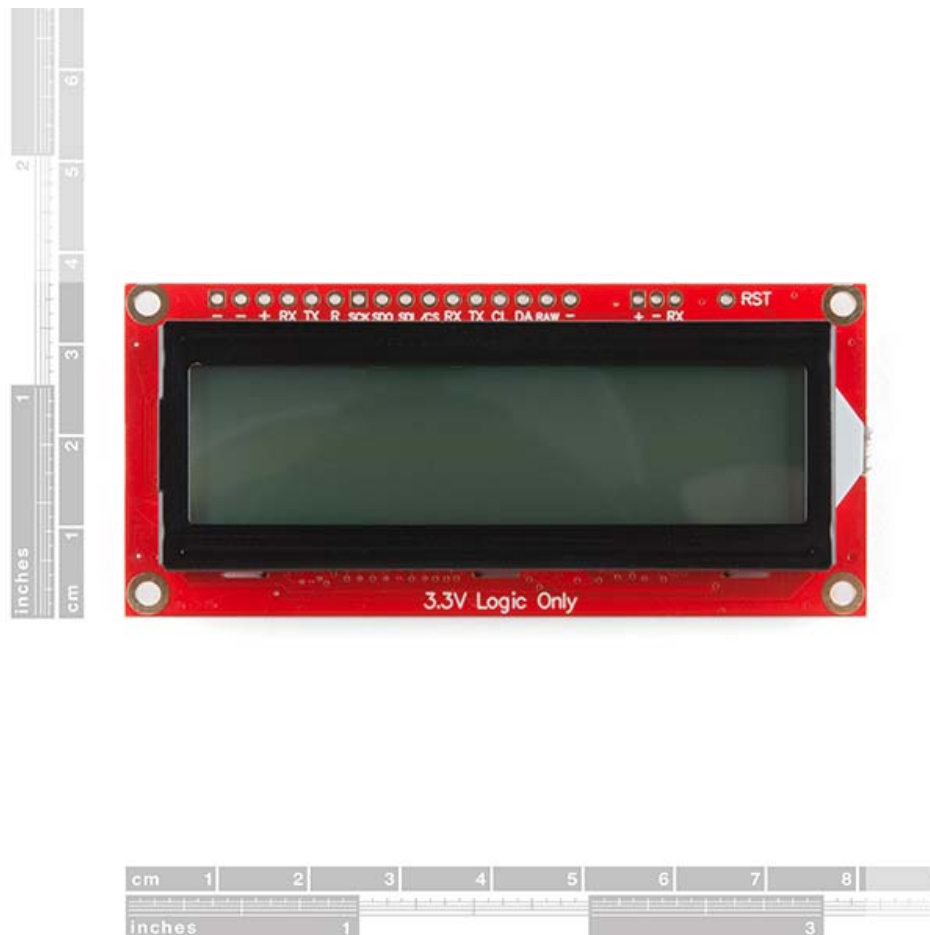
The SparkFun SerLCD is an AVR-based, serial enabled LCD that provides a simple and cost effective solution for adding a 16x2 Black on RGB Liquid Crystal Display into your project. We've seriously overhauled the PCB design on the back of the screen by including an ATmega328P that handles all of the screen control, meaning a backpack is no longer needed! This display can now accept three different types of commands: serial, I<sup>2</sup>C, and SPI. This simplifies the number of wires needed and allows your project to display all kinds of text and numbers.

The on-board ATmega328P AVR microcontroller utilizes 11.0592 MHz crystal for greater communication accuracy with adjustable baud rates of 1200 through 1000000 but is default set at 9600. The firmware for this SerLCD is fully opensource and allows for any customizations you may need.

## FEATURES

- 16x2, Black on RGB Display
- The AVR ATmega328p (with Arduino-compatible bootloader) is populated on the back of each LCD screen and handles all of the LCD control
- Three communication options: Serial, I<sup>2</sup>C and SPI
- Adjustable I<sup>2</sup>C address controlled via software special commands (0x72 default)
- Emergency reset to factory settings (Jumper RX to GND on bootup)
- Operational backspace character
- Incoming buffer stores up to 80 characters
- Pulse width modulation of backlight allows direct control of backlight brightness and current consumption
- Pulse width modulation of contrast allows for software defined contrast amount.
- User definable splash screen
- Open-sourced firmware and Arduino-compatible bootloader enables updates via the Arduino IDE

**Note:** Since the SerLCD is a 3.3V device, please make sure you convert to 3.3V logic depending on your chosen microcontroller or single board computer. Otherwise, you may risk damaging your board.





<https://www.sparkfun.com/products/14072> 8-6-18