

SmartLCD V0.89 Release Notes

Release Notes for PCB Version 1.0
SmartLCD Controller Software Version 0.89
Arduino Bootloader baud rate: 19,200,8,N,1

Overview

Thank you for purchasing the SmartLCD Display Controller. The SmartLCD is an embedded controller with onboard Atmega168 processor that can be used as a standalone data acquisition and display device. With the optional battery holder the SmartLCD becomes completely mobile. The SmartLCD is shipped with the Arduino bootloader installed and the application software that configures the LCD display controller. Complete source code for the Arduino bootloader and the application software is available for download from the SOC Robotics web site. Default Arduino bootloader baud rate is 19,200,N,8,1. Typing '1' followed by space should return the "AVR ISP" message indicating that the serial port is talking to the bootloader. The bootloader flashes the LED group five times before starting the SmartLCD application after about 6 seconds.

The SmartLCD is now shipped with Version 0.89 which combines the SmartLCD application (full source code available) and the Arduino bootloader. For the first 5 seconds the Arduino bootloader is running after which the SmartLCD V0.89 application starts. V0.89 configures the LCD display, outputs a sign-on message, enables the UART (19,200baud) and I2C to accept serial input commands. See the source code for a full summary of commands. V0.89 operates as a serial display terminal by sending the two characters ESC c.

The SmartLCD is available in two versions:

SmartLCD	Standard SmartLCD.
SmartLCD Plus	SmartLCD with 3-axis accelerometer

Note: The SmartLCD is a 2.3-3.4 V device – operation above 3.4 volts will wash out the LCD display and possibly damage the LCD controller. If you need to communicate with the SmartLCD using the I2C ports from a device that is operating at 5V you will need the TM1 or TM1R I2C 5V to 3.3V level shifting adapter. These adapters are available from SOC Robotics, Inc.

Software and Documentation

The SmartLCD User Manual can be downloaded at:

www.soc-robotics.com/pdfs/SmartLCD%20Technical%20Reference%20Manual.pdf

The SmartLCD ICCAVR Project file with full source code for the Version 0.89 software can be downloaded at:

www.soc-robotics.com/downloads/SmartLCD%20Controller%20V0.89.zip

Limited Warranty

The SmartLCD is warranted against defects in materials and workmanship for a period of 90 days from the date of purchase from SOC Robotics, or from an authorized dealer. The USB10 is sensitive to static discharge – please make sure you are grounded when handling the board.

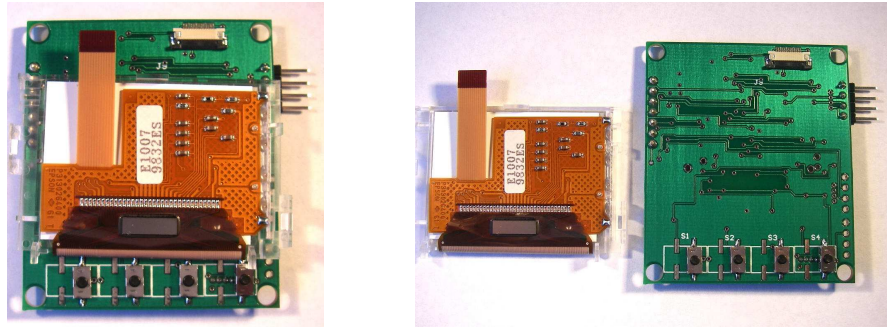
Questions or Concerns

If you have any questions or concerns you can email us at support@soc-machines.com or call (604) 628-7227.

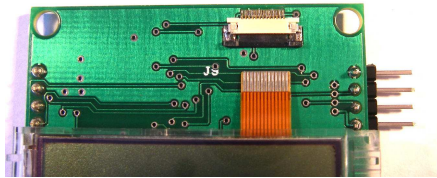
Installing the LCD Display

The SmartLCD is shipped with the LCD screen uninstalled to protect it during shipment. These instructions show you how to install the screen before use.

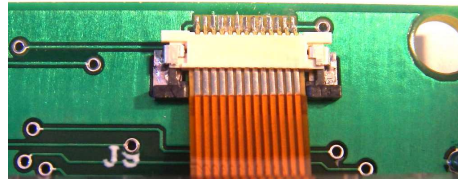
The SmartLCD is shipped with the LCD screen attached backwards on the back of the PCB with the ribbon cable not installed. Remove the tape holding the screen and remove the it.



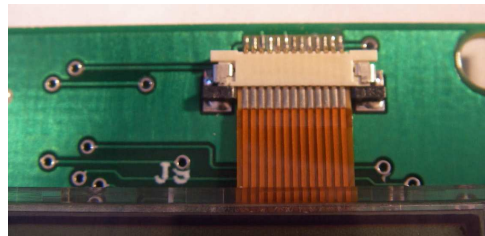
Flip the screen over and position the ribbon cable close to the connector – make sure the securing tabs are pulled back away from the connector.



Insert the ribbon cable into the connector – push it gently but firmly into position.



Push the two small black tabs on either side of the ribbon cable toward the connector to hold the ribbon cable in place.



Plastic tabs on either side of the screen hold it in place on the PCB. That's it!