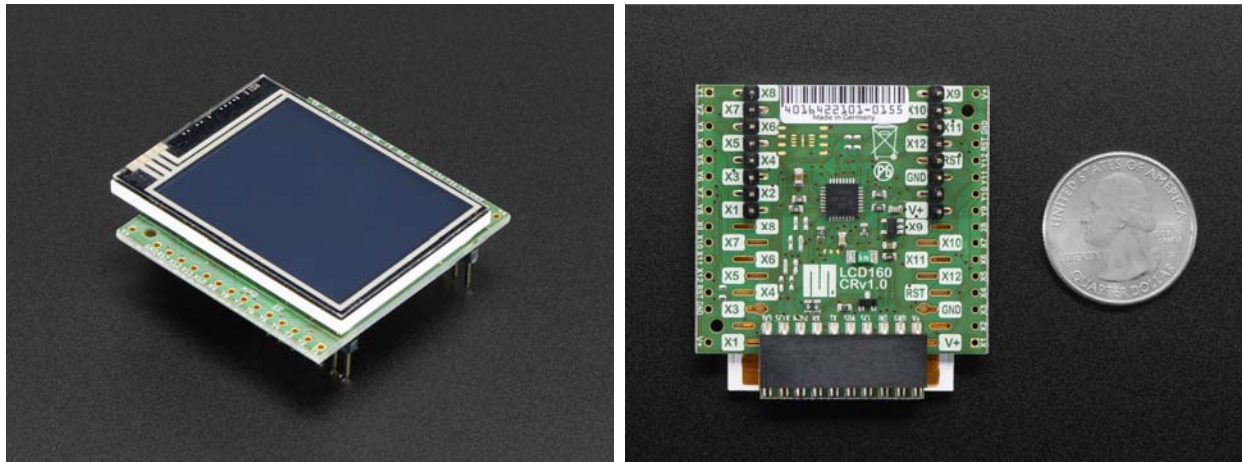# pyboard Color LCD Skin with Resistive Touch

PRODUCT ID: 3498

- **Description**

The color LCD skin is a module that fits right onto the pyboard. It provides a 160x128 pixel, 16-bit graphical LCD display with backlight, as well as a resistive touch sensor covering the entire screen.

The screen has 160x128 pixels of 16-bit color, has a backlight with a software-controllable intensity, and a resistive touch sensor which can detect a single force-based touch anywhere on the screen. The display has a custom controller which accepts serial commands via its I2C and UART interfaces, and SPI for receiving raw data.

When sending ASCII and UTF-8 encoded characters to the display, it acts like a simple terminal and prints those characters directly to the screen using the current font and color setting. New-lines are handled accordingly, along with a few of the basic ANSI escape codes, which allows the display to show the MicroPython REPL (or any other such serial output).

There is a set of special control commands (also sent via I2C and UART) which allow one to perform many operations on the screen, such a drawing primitive shapes, setting color and font, downloading JPEG images, and getting the current status of the resistive touch sensor. The SPI interface to the display can be used to send raw data to the pixels at a maximum rate of 30 frames per second.

The following resources are available for the LCD display:

- o A video giving an overview of the features, https://www.youtube.com/watch?v=OOz9U_YdstM
- o A tutorial which guides you through the basics of using the display, https://docs.micropython.org/en/latest/pyboard/pyboard/tutorial/lcd160cr_skin.html
- o Documentation for the driver, https://docs.micropython.org/en/latest/pyboard/library/lcd160cr.html
- o The driver written in MicroPython; this driver is included by default in recent versions of the pyboard firmware and you can just do *import lcd160cr* to use it. https://github.com/micropython/micropython/blob/master/drivers/display/lcd160cr.py
- o The reference manual with a command summary and technical details, https://micropython.org/resources/LCD160CRv10-refmanual.pdf
- o The schematics showing the circuit and physical connections. https://micropython.org/resources/LCD160CRv10-refmanual.pdf

This display comes with male header pins already soldered on the back of the module. The header pins plug directly into a pyboard with female headers.

pyboard not included, but you can pick one up in the shop! This display module is compatible with *all* pyboards!

- • **Technical Details**

If you have any queries, please email contact@micropython.org

Product Dimensions: 48.0mm x 45.0mm x 15.3mm / 1.9" x 1.8" x 0.6"

Product Weight: 18.4g / 0.6oz