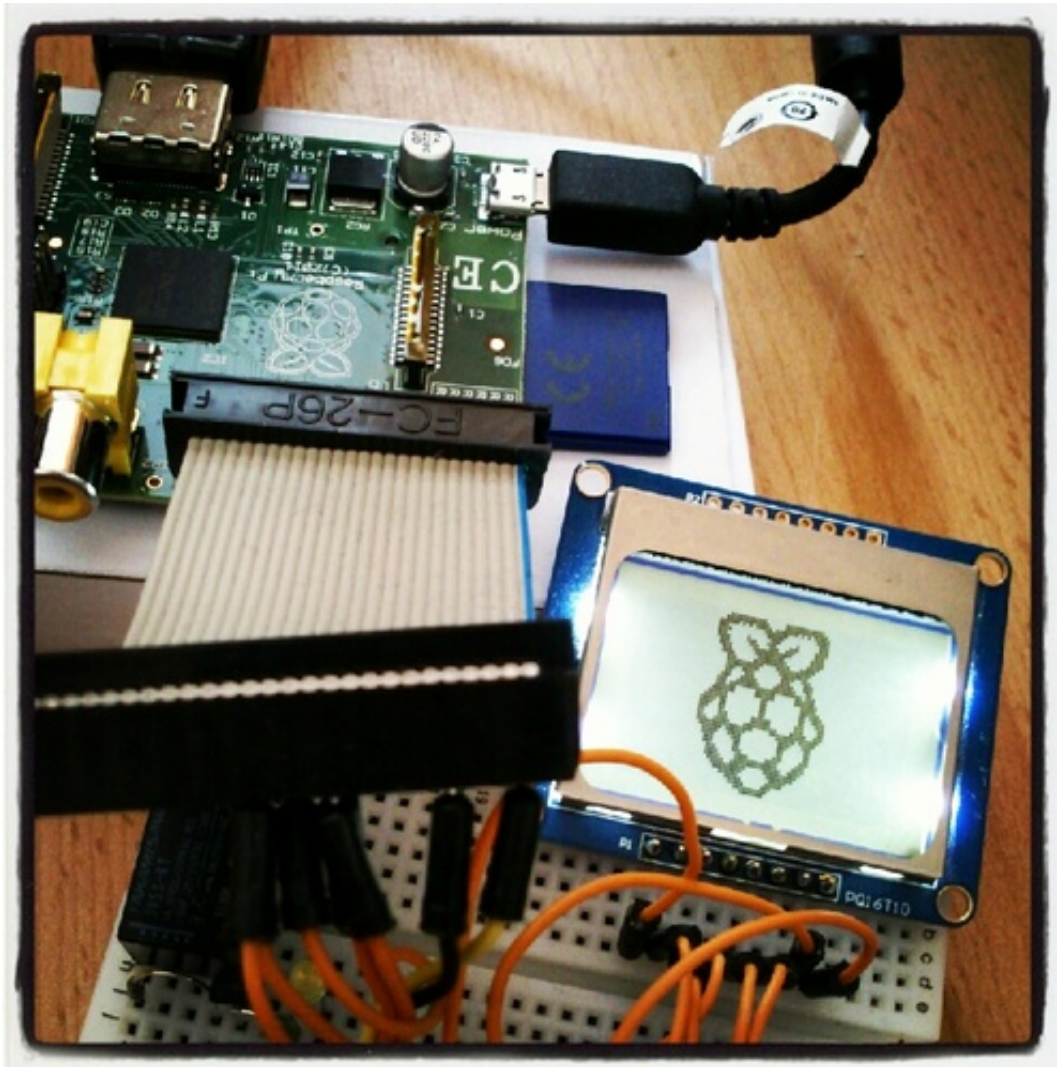


PCD8544 Library for Raspberry Pi

(Nokia 3310/5110 Display)



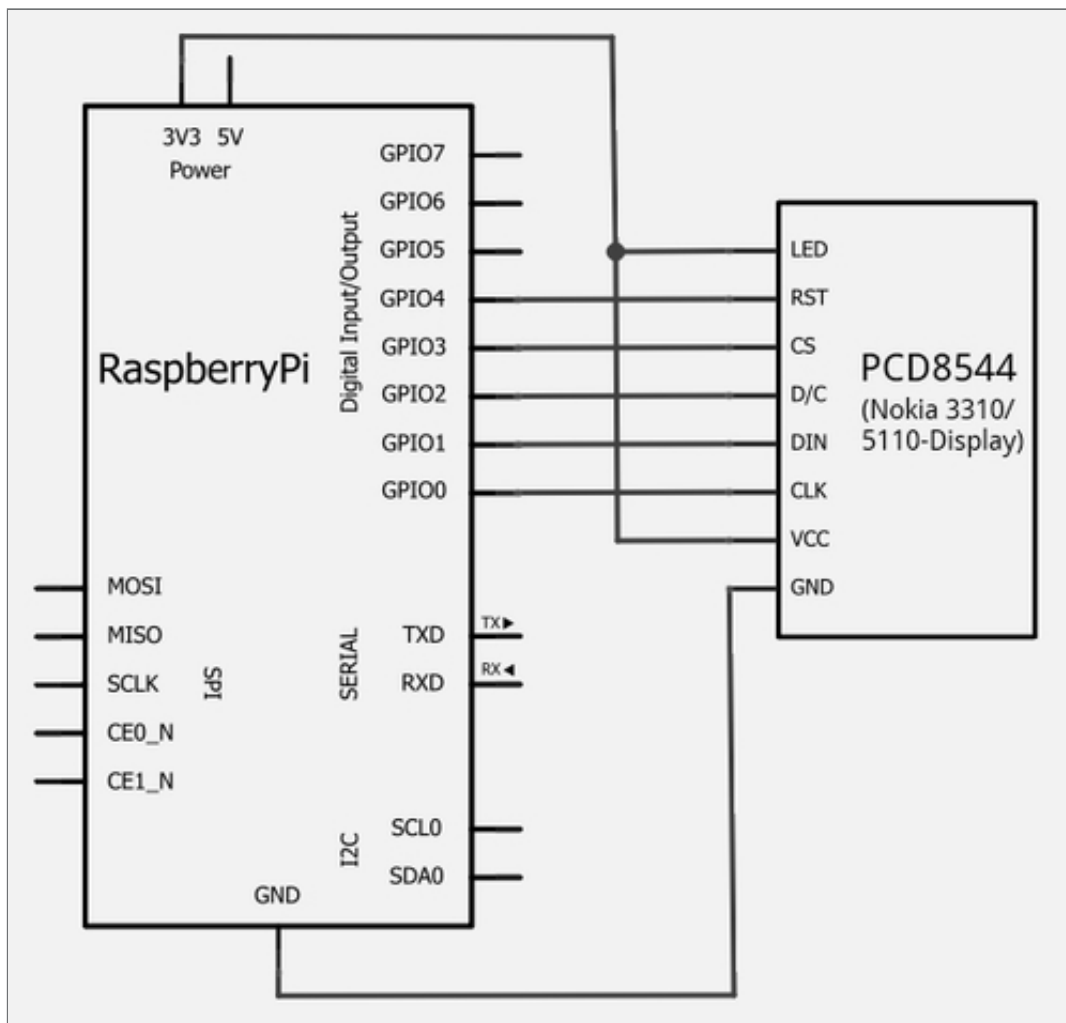
For some Arduino/ATmega328p/ μ C-based projects i've used a PCD8544-based Nokia 3310/5110 Display. The main advantages of this display are the low price and the simplicity of driving it. So since i've got my first Raspberry Pi and discovered the GPIO-functionality i wanted to drive this display with my RPi.

After a few tests i've decided to port the library of the [meshphone-project](#) by *Le Dang Dung* based on the Arduino-library written by [Limor Fried, Adafruit Industries](#). This driver uses 5 GPIOs on target board with a bit-bang SPI implementation (*hence, may not be as fast, but seems fast enough...*).

To be honest, it was not much effort and required not many changes until the library works on Raspberry Pi. It makes use of [WiringPI-library of Gordon Henderson](#) - so the WiringPI-library is required to be installed. By the way - Gordon has created a nice overview of the [RPi GPIO pin mapping](#).

Since the PCD8544-chip and the GPIO pins of Raspberry Pi are designed to run at 3V3 and both have 3V communication levels there is **no** logic level shifter (e.g. 4050 like with Arduino) required.

Important Note: *Please check the pin assignment of your LCD before you connect it - Nokia 3310 and Nokia 5110 pin assignments can vary, also different breakout-boards can have different pin assignments!*



Based on the origin library this version is also licensed under GPL. Feel free to [check it out at github](#) or download it directly:

https://github.com/downloads/binerry/RaspberryPi/Raspberry.Pi_PCD8544.Library.zip

There are also three samples available: basic functions (*pcd8544_test.c*), animation (*pcd8544_test2.c*) and a basic system monitor (*pcd8544_rpi.c*).

Since gcc is installed on Raspberry Pi images (*tested [debian6-squeeze-2012-04-19](#) and [debian7-wheezy-2012-06-18 beta](#)*) you can easily build them via

```
cc -o pcd8544_test pcd8544_test.c ../PCD8544.c -L/usr/local/lib -lwiringPi
cc -o pcd8544_test2 pcd8544_test2.c ../PCD8544.c -L/usr/local/lib -lwiringPi
cc -o pcd8544_rpi pcd8544_rpi.c ../PCD8544.c -L/usr/local/lib -lwiringPi
```

and run them via

```
sudo ./pcd8544_test
sudo ./pcd8544_test2
sudo ./pcd8544_rpi
```

