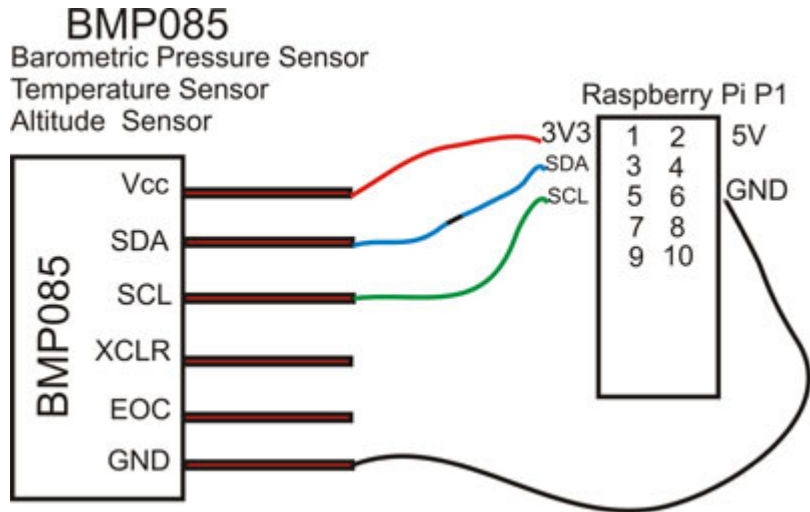


Raspberry Pi - BMP085 Barometric Pressure/ Temperature/ Altitude Sensor User Manual



BMP085 is a kind of pressure sensor with high precision, low energy, which can be used in mobile devices. Its excellent performance makes the absolute precision reach the minimum 0.03hPa, and it is with very low power consumption, only 3u A. Using powerful 8-pin ceramic leadless chip carrier (LCC) thin package, BMP085 can be connected directly with a variety of microprocessors through I2C bus.

Main features:

- Pressure range: 300 – 1100hPa (at an altitude of 9000 meters to 500 meters)
- Supply voltage: 1.8V – 3.6V (VDDA) 1.62V – 3.6V (VDDD)
- LCC8 package: ceramic leadless chip carrier (LCC)
- Size: 5.0mmx5.0x1.2mm
- Low consumption: 5 μ A in standard mode
- High accuracy: resolution ratio is 0.06hPa (0.5 meter) in low power consumption mode; 0.03hPa (0.25 meter) in high linear mode
- Temperature output

- I2C interface
- Temperature compensation
- Leadless, accord with RoHS standard
- MSL 1
- Response time: 7.5ms
- Standby current: 0.1 μ A
- No need for external clock circuit

Test Program can be download from our web site

<http://www.pridopia.co.uk/pi-bmp085-temp.html>

Package Content

- 1x Rs-Pi BMP085 Sensor
- 4x 20cm male to male cable
- 1x manual

1. Make sure you I2C driver are enable

To enable it all you need to do is comment out a line by putting # in front
`sudo nano /etc/modprobe.d/raspi-blacklist.conf`

```
COM37 - PuTTY
# blacklist spi and i2c by default (many users don't need them)
#blacklist spi-bcm2708
#blacklist i2c-bcm2708
```

2. Add i2c-dev in /etc/modules by use
sudo nano /etc/modules

```
COM37 - PuTTY
# /etc/modules: kernel modules to load at boot time.
#
# This file contains the names of kernel modules that should be load
ed
# at boot time, one per line. Lines beginning with "#" are ignored.
# Parameters can be specified after the module name.

snd-bcm2835
spi-bcm2708
i2c-bcm2708
i2c-dev
rtc-1307
tmp102
```

If you already install I2c driver , then
i2cdetect -y 0 i2cdetect -y 1 → V2

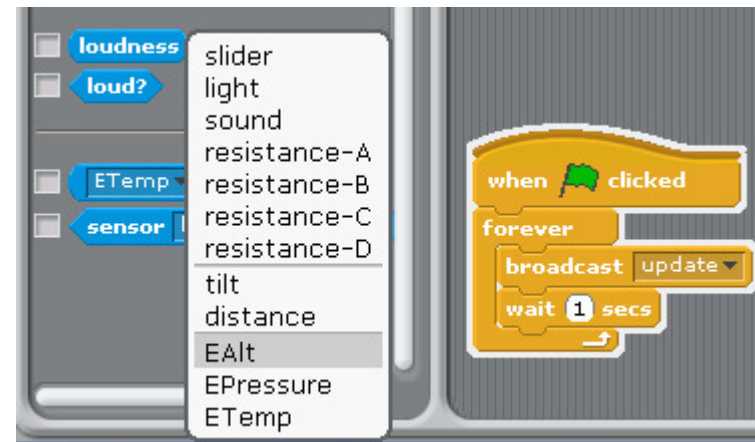
```
192.168.0.19 - PuTTY
Linux raspberrypi 3.6.11+ #456 PREEMPT Mon May 20 17:42:15 BST
The programs included with the Debian GNU/Linux system are free
the exact distribution terms for each program are described in
individual files in /usr/share/doc/*/copyright.
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the exte
permitted by applicable law.
Last login: Tue Nov 12 16:37:02 2013
root@raspberrypi:~# i2cdetect -y 1
 0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00: --
10: --
20: --
30: --
40: --
50: --
60: --
70: --
77: --
root@raspberrypi:~#
```

in i2cdetect you can found 1 device in system 77
77 – BMP085

Next install the python-smbus python module:
sudo apt-get install python-smbus
sudo apt-get install i2c-tools

.Pi_Scratch interface software download from our web site

<http://www.pridopia.co.uk/rs-pi-set-scratch.html>



1. command "bmp085init" initial bmp085 sensor
2. after broadcast ""Update" in Sensing --> Slider , you will see the " EAlt" "Epressure" "ETemp" in the list

