EE895 and RaspberryPi (I²C)

QUICK START GUIDE

This document deals with the communication between an EE895 Sensor Module and a RaspberryPi via simplified I²C.



Connect the EE895 Sensor Module with RaspberryPi according to the following scheme:



	-	ENABLE
GND 🗮		, GND
	2	
3V3 power o	00	 5V power
GPIO 2 (SDA) o	00	 5V power
GPI0 3 (SCL) •	00	Ground
GPIO 4 (GPCLK0) •	00	 GPI0 14 (TXD)
Ground o-	00	 GPIO 15 (RXD)
GPI0 17 •	00	 GPI0 18 (PCM_CLK)
GPI0 27 o-	• •	 Ground
GPI0 22 •	00	 GPIO 23
3V3 power •	(D) (D)	 GPIO 24
GPIO 10 (MOSI) -	00	 Ground
GPIO 9 (MISO) •	00	 GPIO 25
GPI0 11 (SCLK) •	00	 GPIO 8 (CE0)
Ground o	00	 GPIO 7 (CE1)
GPIO 0 (ID_SD) .	00	 GPIO 1 (ID_SC)
GPIO 5 o	00	 Ground
GPI0 6 .	00	 GPIO 12 (PWM0)
GPIO 13 (PWM1) .	00	 Ground
GPIO 19 (PCM_FS) o-	00	 GPIO 16
GPI0 26 .	00	 GPIO 20 (PCM_DIN)
Ground o	00	GPIO 21 (PCM DOUT)

STEP 2

Download and install operation system (<u>https://www.raspberrypi.org/downloads/raspbian/</u>). Raspbian is recommended, whereas any other distribution with i2ctools package will work.

STEP 3

Boot RaspberryPi and complete any first-time setup if necessary (find instructions online). Open a command shell and type following command to retrieve measurement data – that's it!

Example queries and outputs:

Get CO₂ value: pi@testRPi3:~\$ i2cget -y 1 0x5e 0 w 0x6104

Value 0x6104 (big endian) means 1121 ppm.

Get temperature value:

pi@testRPi3:~\$	i2cget	-у	1	0x5e	2	w
0x870b						

Value 0x870b (big endian) means 29.51 °C.

Get pressure value:

i2cget -y	1	0x5e	6	w	
0x6b26					

Value 0x6b26 (big endian) means 983.5 mbar.

Disclaimer:

This application example is non-binding and does not claim to be complete with regard to configuration and equipment as well as all eventualities. The application example is intended to provide assistance with EE895 Miniature Sensor Module design-in and is provided "as is". You yourself are responsible for the proper operation of the products described. This application example does not release you from the obligation to handle the product safely during application, installation, operation and maintenance. By using this application example, you acknowledge that we cannot be held liable for any damage beyond the liability regulations described. We reserve the right to make changes to this application example at any time without notice. In case of discrepancies between the suggestions in this application example and other E+E publications, such as catalogues, the content of the other documentation takes precedence.

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