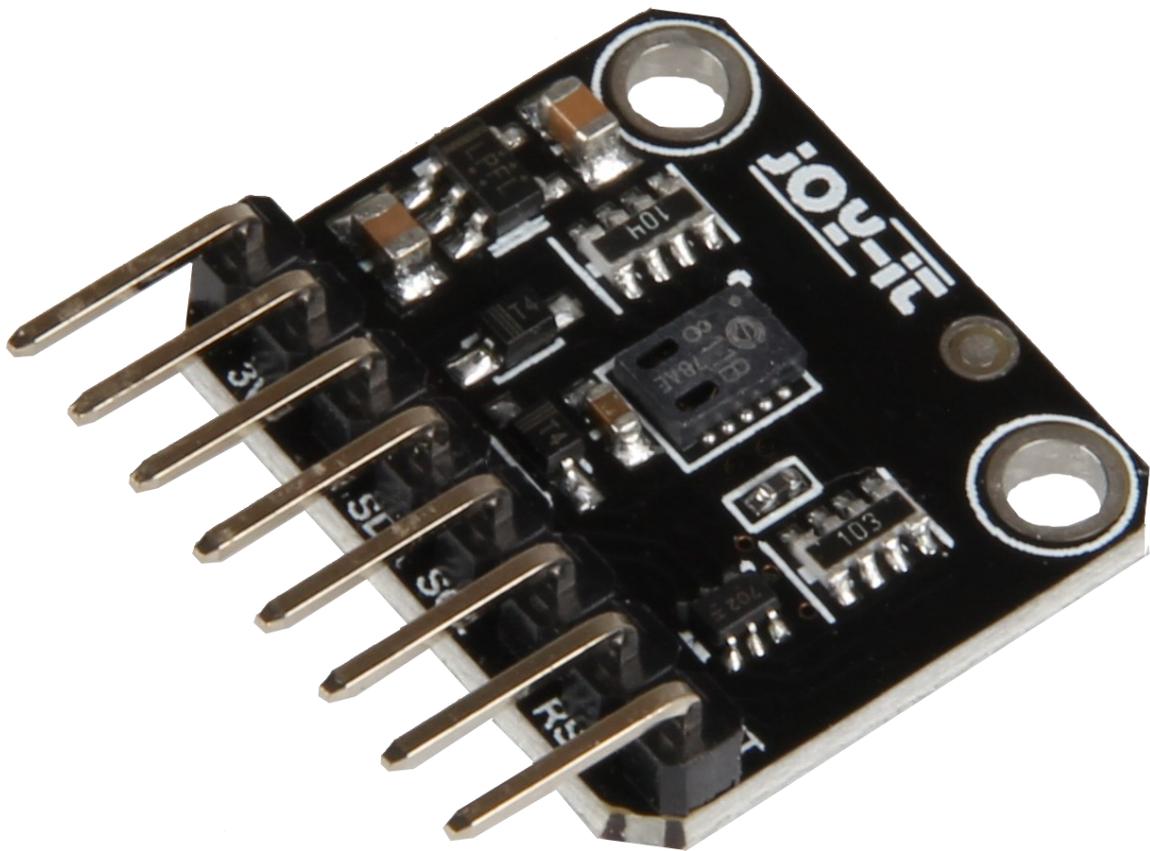




# JOY-IT



SEN-CCS811V1  
Air Quality sensor

## INHALTSVERZEICHNIS

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## 1. Introduction

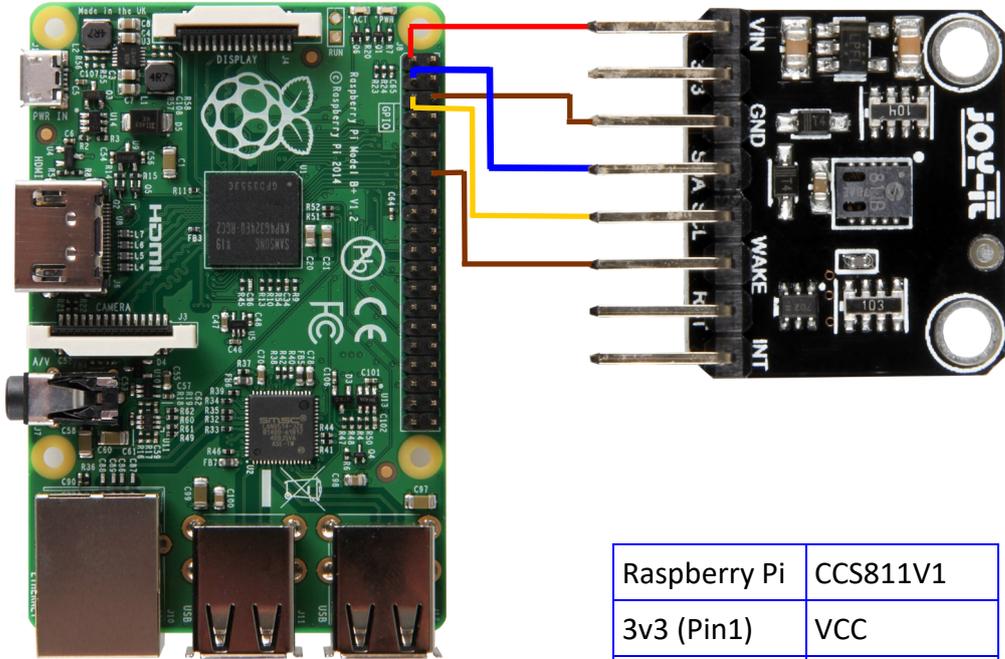
Dear customer,  
thank you for choosing our product.

In the following, we will show you what to observe during the use.  
If you encounter any unexpected problems during use, please do not hesitate to contact us.

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## 2. How to use with RaspberryPi

### 2.1 Wiring



Raspberry Pi	CCS811V1
3v3 (Pin1)	VCC
GND (Pin 6)	GND
SCL (Pin 5)	SCL
SDA (Pin 3)	SDA
GND (Pin14)	Wake

### 2.2 Installation

Open the terminal and execute the following command:

```
sudo pip3 install adafruit-circuitpython-ccs811
```

The necessary libraries will be installed now.

Now you have to activate I2C:

```
sudo raspi-config
```

Choose **Interfacing Options** -> and activate **I2C**.

Use the following command:

```
sudo apt-get update
```

Now we install another necessary library.

```
sudo apt-get install -y build-essential python-pip python-dev python-smbus git
git clone https://github.com/adafruit/Adafruit_Python_GPIO.git
cd Adafruit_Python_GPIO
sudo python setup.py install
```

Now we install the CCS811V1 Adafruit library:

```
sudo pip install Adafruit_CCS811
```

Now we have to reduce the Baudrate wich we can do in the config.txt:

```
sudo nano /boot/config.txt
```

Just add the following line to the end of the Config.txt:

```
dtparam=i2c_baudrate=10000
```

## 2.3 Code Example

```

import time
import board
import busio
import adafruit_ccs811

i2c = busio.I2C(board.SCL, board.SDA)
ccs811 = adafruit_ccs811.CCS811(i2c)

# Wait for the sensor to be ready and calibrate the thermistor
while not ccs811.data_ready:
    pass
temp = ccs811.temperature
ccs811.temp_offset = temp - 25.0

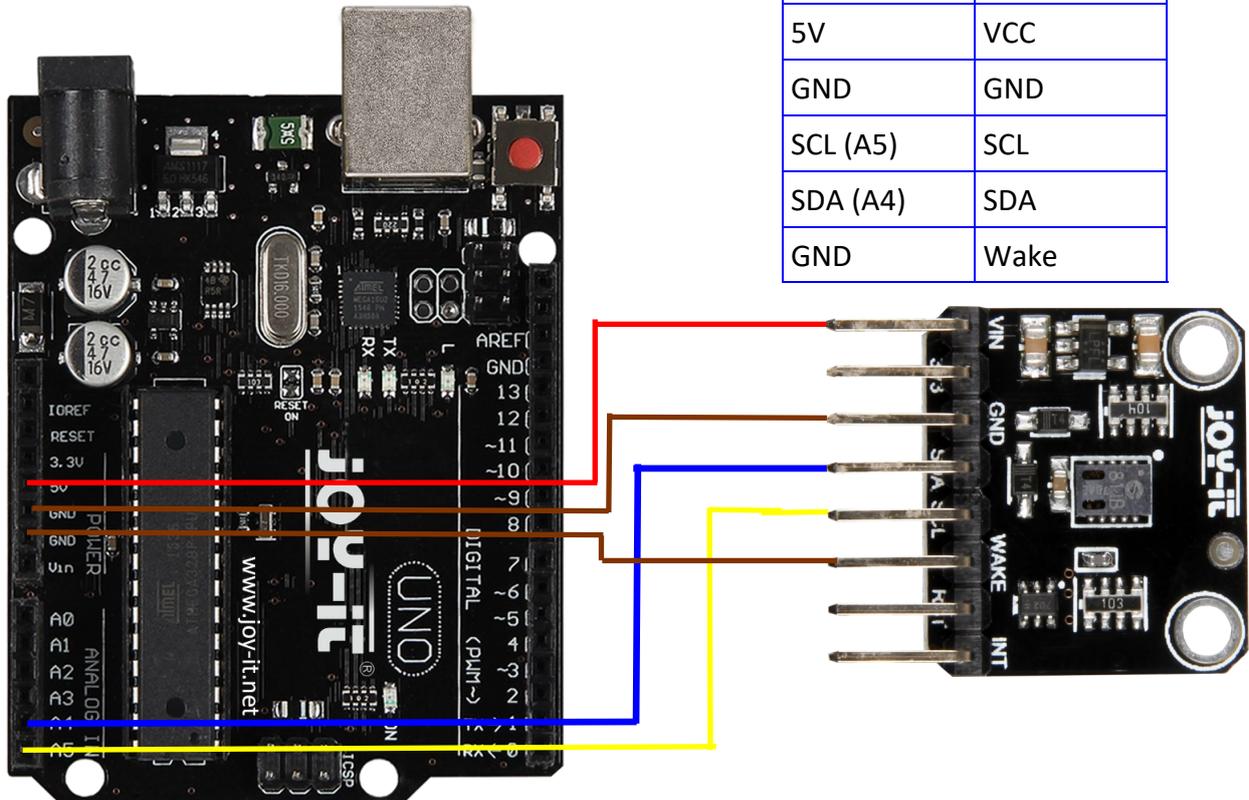
while True:
    print("CO2: {} PPM, TVOC: {} PPM, Temp: {} C"
          .format(ccs811.eco2, ccs811.tvoc, ccs811.temperature))
    time.sleep(0.5)

```

## 3. How to use with the Arduino

### 3.1 Wiring

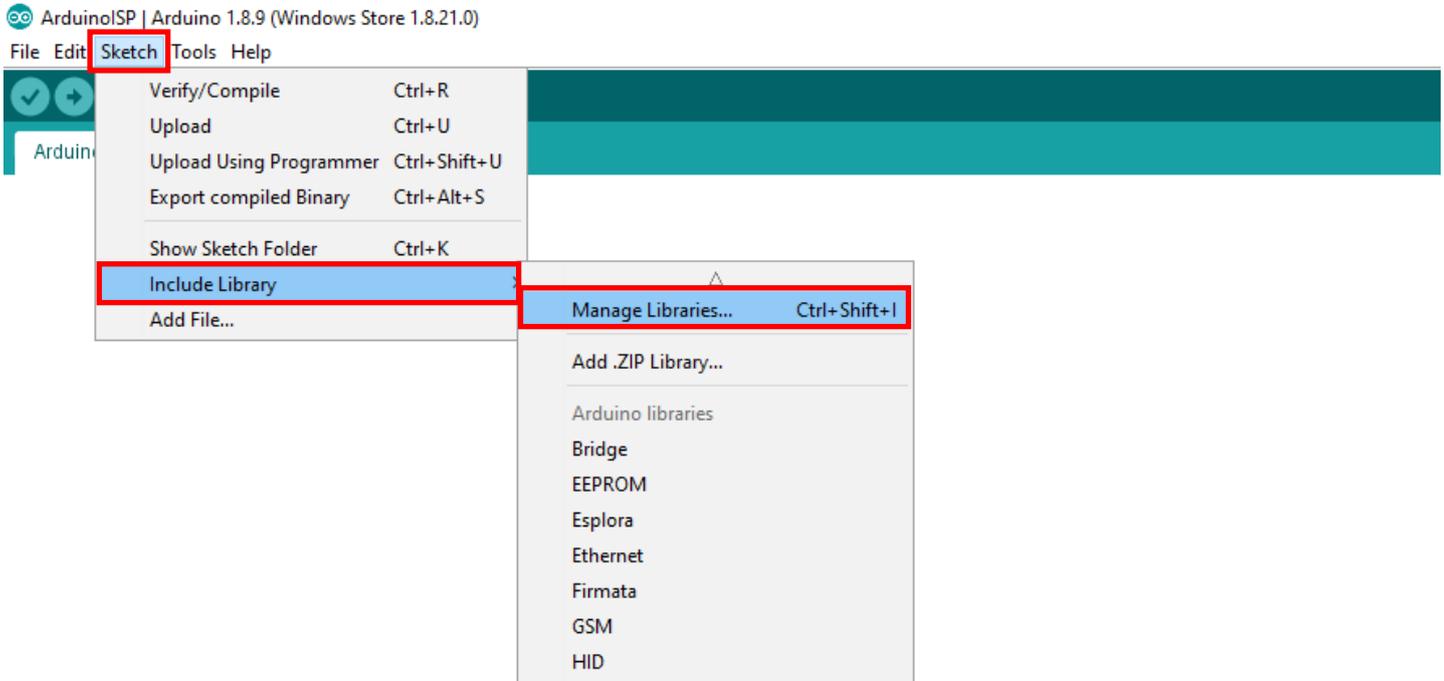
Arduino	BME680
5V	VCC
GND	GND
SCL (A5)	SCL
SDA (A4)	SDA
GND	Wake



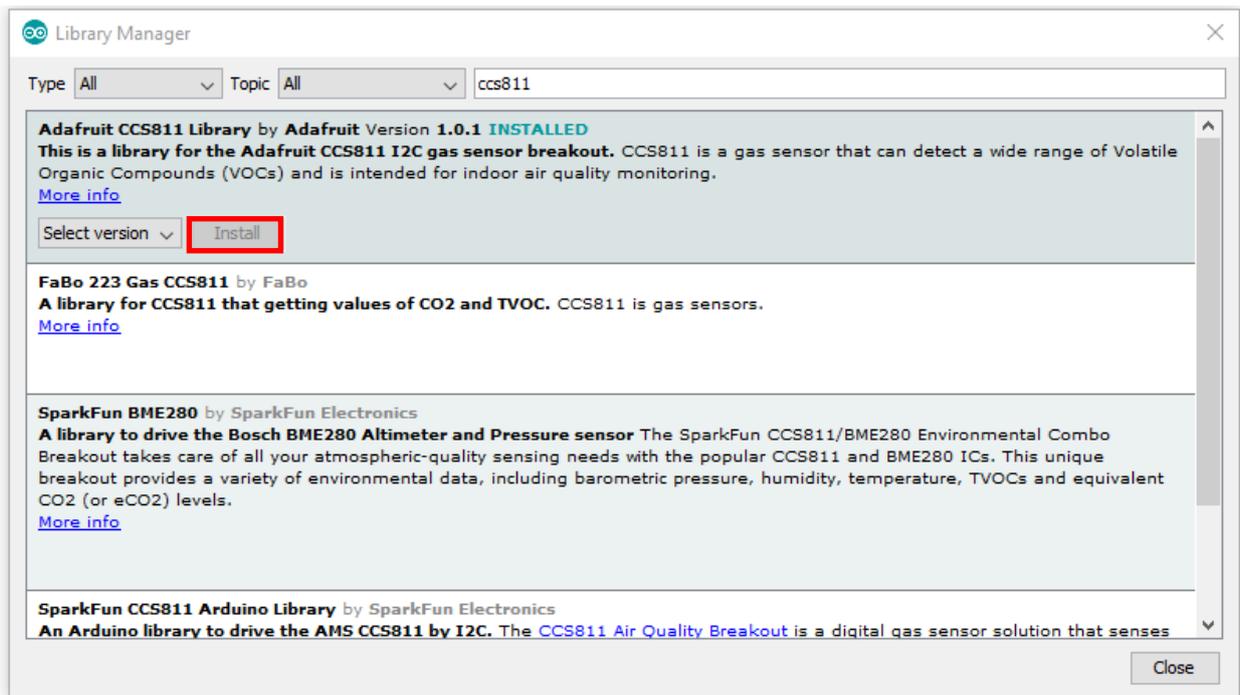
### 3.2 Installation

You have to install the following library to use the sensor.

Click on **Sketch** -> **Include Library** -> **Manage Libraries...**



Search for „CCS811“ and install the **Adafruit CCS811 Library by Adafruit**



### 3.3 Code Example

```

/*****
  This is a library for the CCS811 air

  This sketch reads the sensor

  Designed specifically to work with the Adafruit CCS811 breakout
  ----> http://www.adafruit.com/products/3566

  These sensors use I2C to communicate. The device's I2C address is 0x5A

  Adafruit invests time and resources providing this open source code,
  please support Adafruit and open-source hardware by purchasing products
  from Adafruit!

  Written by Dean Miller for Adafruit Industries.
  BSD license, all text above must be included in any redistribution
  *****/

#include "Adafruit_CCS811.h"

Adafruit_CCS811 ccs;

void setup() {
  Serial.begin(9600);

  Serial.println("CCS811 test");

  if(!ccs.begin()){
    Serial.println("Failed to start sensor! Please check your wiring.");
    while(1);
  }

  //calibrate temperature sensor
  while(!ccs.available());
  float temp = ccs.calculateTemperature();
  ccs.setTempOffset(temp - 25.0);
}

void loop() {
  if(ccs.available()){
    float temp = ccs.calculateTemperature();
    if(!ccs.readData()){
      Serial.print("CO2: ");
      Serial.print(ccs.getCO2());
      Serial.print("ppm, TVOC: ");
      Serial.print(ccs.getTVOC());
      Serial.print("ppb Temp:");
      Serial.println(temp);
    }
    else{
      Serial.println("ERROR!");
      while(1);
    }
  }
  delay(500);
}

```

## 4. Information and Take-back Obligations

### Symbol on electrical and electronic equipment



This crossed-out dustbin means that electrical and electronic equipment does not belong in the household waste. You must return the old appliances to a collection point. Before handing over waste batteries and accumulators that are not enclosed by waste equipment must be separated from it.

### Return options

As an end user, you can return your old appliance (which essentially fulfils the same function as the new appliance purchased from us) free of charge for disposal when you purchase a new appliance. Small appliances with no external dimensions greater than 25 cm can be disposed of in normal household quantities independently of the purchase of a new appliance.

### Possibility of return at our company location during opening hours

Simac GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn

### Possibility of return in your area

We will send you a parcel stamp with which you can return the device to us free of charge. Please contact us by e-mail at [Service@joy-it.net](mailto:Service@joy-it.net) or by telephone.

### Information on packaging

If you do not have suitable packaging material or do not wish to use your own, please contact us and we will send you suitable packaging.

## 5. Support

We also support you after your purchase. If there are any questions left or if you encounter any problems, please feel free to contact us by mail, phone, or by our ticket-support-system on our website.

E-Mail: [service@joy-it.net](mailto:service@joy-it.net)

Ticket-System: <http://support.joy-it.net>

Phone: +49 (0)2845 98469 – 66 (11- 18 o'clock)

For more information, please visit our website:

[www.joy-it.net](http://www.joy-it.net)