Pressure Sensor

BM1386GLV-EVK-001 Manual

BM1386GLV-EVK-001 is an evaluation board for BM1386GLV, which is a ROHM Pressure Sensor. This User's Guide is about how to use BM1386GLV-EVK-001 together with SensorShield that is sold as Shield-EVK-001.

Preparation

- Arduino Uno 1pc
- Personal Computer installed Arduino IDE 1pc
  - Requirement : Arduino 1.6.7 or higher
  - Please use Arduino IDE which can be downloaded from the link below: http://www.arduino.cc/
- USB cable for connecting Arduino and PC 1pc
- SensorShield 1pc
- BM1386GLV-EVK-001 1pc

Setting

1. Connect the Arduino and the SensorShield (Figure 1)

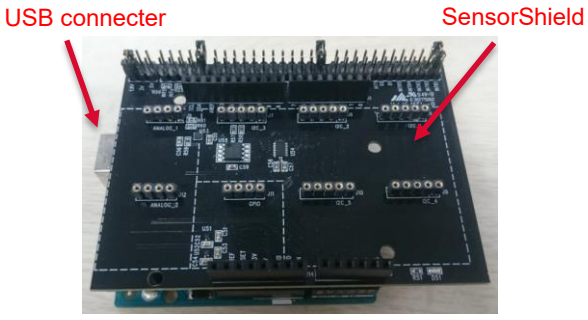

Figure 1. Connection between the Arduino and the SensorShield

2. Connect BM1386GLV-EVK-001 to the socket of I2C area on the SensorShield (Figure 2)
3. Set Voltage of the SensorShield to 1.8V or 3.0V (Figure 2)

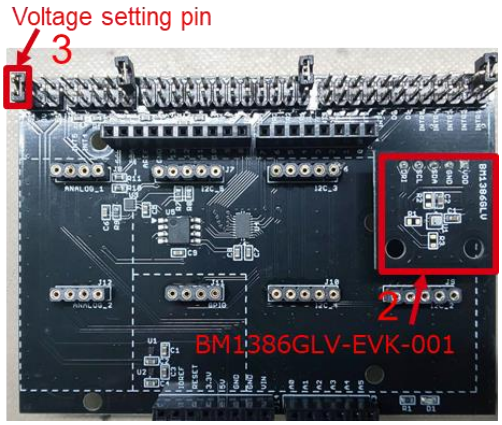

Figure 2. Connection between BM1386GLV-EVK-001 and the SensorShield

4. Connect the Arduino to the PC using a USB cable
5. Download BM1386GLV.zip from the link below: http://www.rohm.com/web/global/sensor-shield-support (Software is subject to change without no notice.)
6. Launch Arduino IDE
7. Select [Sketch]->[Include Library]->[Add.ZIP library...], install BM1386GLV.zip
8. Select [File]->[Examples]->[BM1386GLV]->[example]->[BM1386GLV]

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Measurement

1. Select [Tools] and check the contents enclosed in the red frame. (Figure 3) Board should be "Arduino/Genuino Uno" and Port should be COMxx (Arduino/Genuino Uno). COM port number is different in each environment.

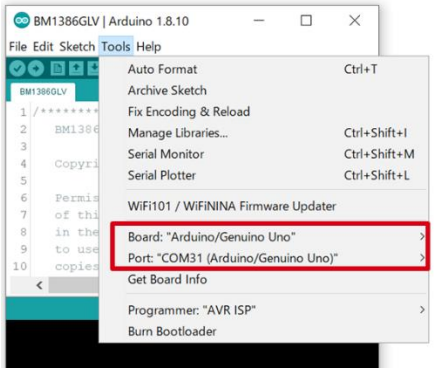

Figure 3. Board and COM Port setting

2. Write the program by pressing right arrow button for upload (Figure 4)
3. Wait for the message "Done uploading" (Figure 4)

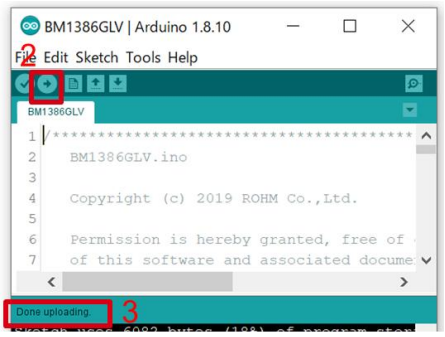

Figure 4. Uploading

4. Select [Tools]->[Serial Monitor] (Figure 5)

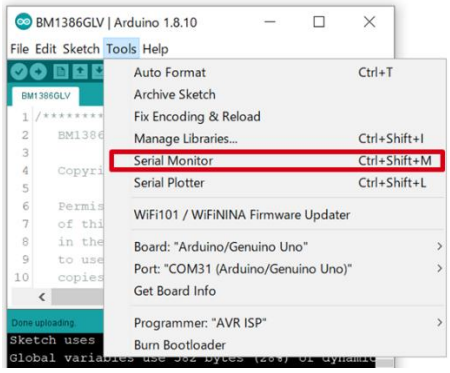

Figure 5. Tools Setting

5. Set baudrate to 115200 and check log of Serial Monitor (Figure 6)

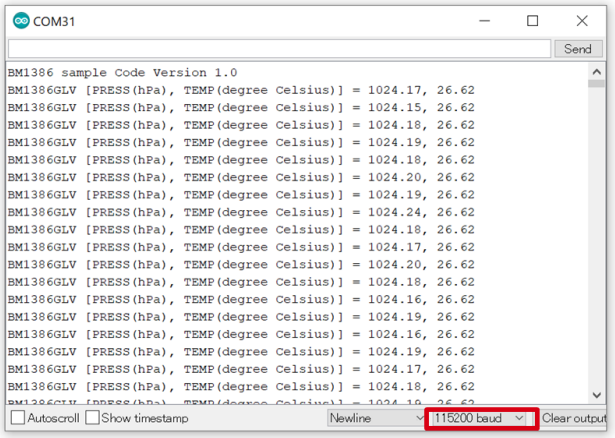

Figure 6. Serial Monitor

Board Information

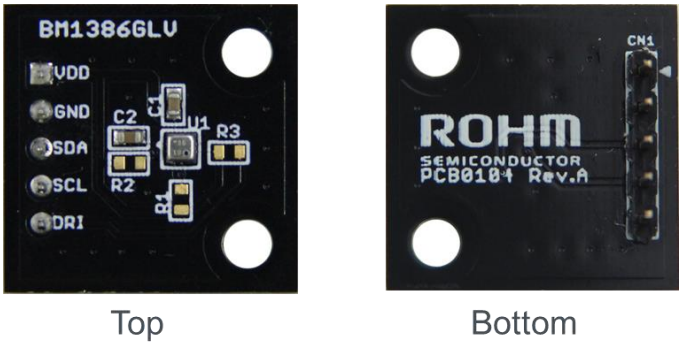

Figure 7. Picture of the board

Parts number	Function
C1	Bypass capacitor for VDD(0.1uF)
C2	Bypass capacitor for VREG(0.22uF)
R1	Pull-up register for SDA(N.M.)
R2	Pull-up register for SCL(N.M.)
R3	Pull-up register for DRI (N.M.)

※N.M. = No Mount

Table 1. Parts information

Notes

1) The information contained herein is subject to change without notice.

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3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors.
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4) Examples of application circuits, circuit constants and any other information contained herein are provided only to illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.

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