Pressure Sensor

BM1390GLV-EVK-001 Manual

BM1390GLV-EVK-001 is an evaluation board for BM1390GLV, which is ROHM pressure sensor. This User's Guide is about how to use BM1390GLV-EVK-001 together with ROHM Shield for Arduino [*1].

*1 ROHM Shield for Arduino is sold separately or as part of ROHM sensor evaluation kit. This User's Guide uses Shield-EVK-001 of Shield for Arduino.

Preparation

·	BM1390GLV-EVK-001	1pc
·	Shield for Arduino	1pc
·	Arduino Uno	1pc
·	USB Cable	1pc
·	Computer Installed Arduino IDE	1pc

- Requirement: Arduino IDE 1.8.13 or higher
- Please get Arduino IDE from the link below:
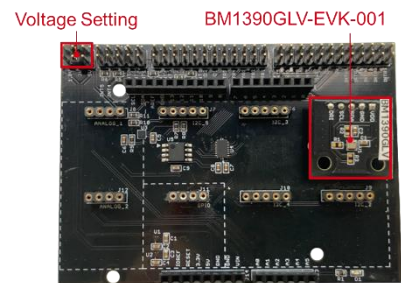 http://www.arduino.cc/

Figure 2. Board Connection and Voltage Setting

Setting

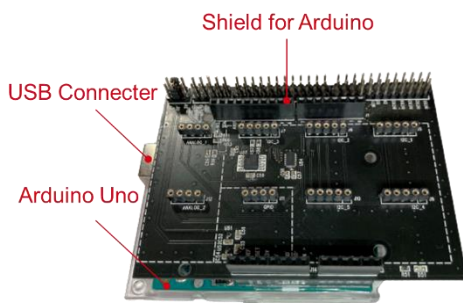1. Connect Arduino Uno and Shield for Arduino. (Figure 1)

Figure 1. Connection of Arduino Uno and Shield for Arduino

2. Connect BM1390GLV-EVK-001 to the socket of I2C area on Shield for Arduino. (Figure 2)
3. Set the voltage of Shield for Arduino to 1.8V or 3.0V. (Figure 2)

4. Connect Arduino Uno to Computer using USB cable.
5. Get BM1390GLV Software [*2] from the link below:
   https://www.rohm.com/sensor-shield-support
   *2 The software is subject to change without notice.
6. Launch Arduino IDE.
7. Select [Sketch] -> [Include Library] -> [Add.ZIP library...], then BM1390GLV Software. (Figure 3)
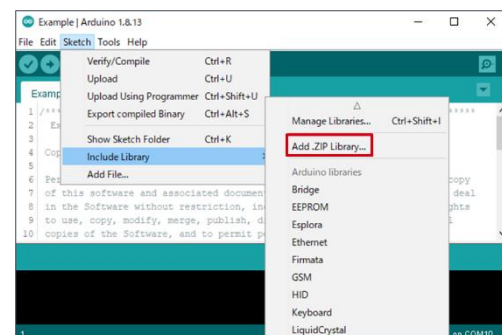

Figure 3. Software Installation

8. Select [File] -> [Examples] -> [Examples from custom libraries], then BM1390GLV Software.

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Measurement

1. Select [Tools]. Set Board to "Arduino Uno" and Port to "COMxx (Arduino Uno)" *3. (Figure 4)

   *3 COM number is different in each environment.
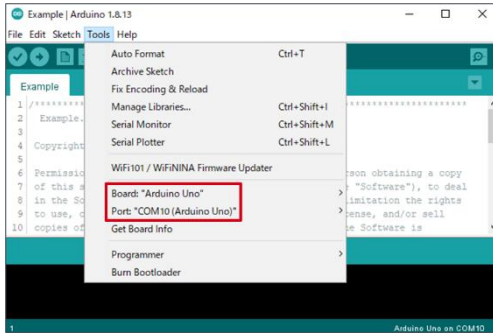

Figure 4. Board and Port Setting

2. Click the write button and wait for the message "Done uploading.". (Figure 5)

Figure 5. Done Uploading

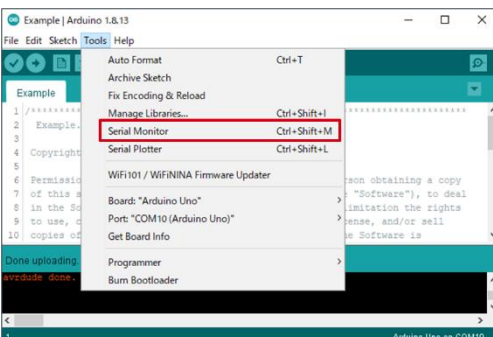3. Select [Tools] -> [Serial Monitor]. (Figure 6)

Figure 6. Selecting Serial Monitor

4. Set the baudrate to 115200 baud and check log of Serial Monitor. (Figure 7)
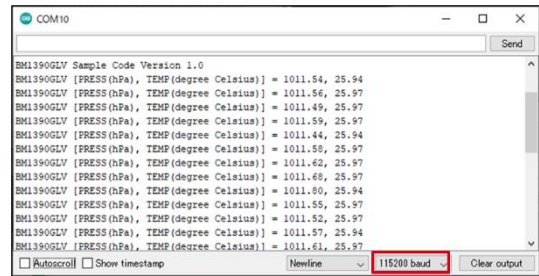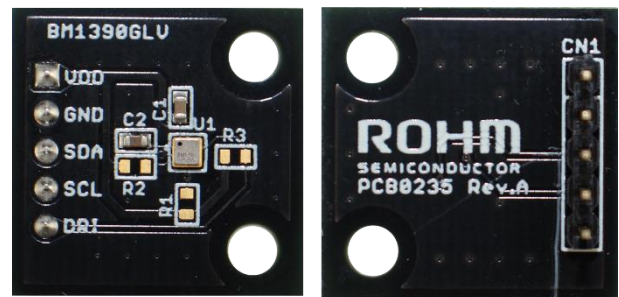

Figure 7. Example of Serial Monitor

Board Information *4

*4 Board Information is subject to change without notice.

- Digital Communication Interface: I2C
- Slave Address: 0x5D
- Selectable Voltage of Shield for Arduino: 1.8V, 3V
- Supply Voltage for VDD: 1.7V - 3.6V
- Operating Temperature Range: -40℃ – +85℃

Note: BM1390GLV-EVK-001 is non-waterproof.

Front   Back

Figure 8. Board Pictures

Table 1. Parts Information

Parts Number	Description
U1	IC: BM1390GLV
C1	Bypass capacitor for VDD: 0.1uF
C2	Bypass capacitor for VREG: 0.22uF
R1	Pull-up register for SDA: N.M. *5
R2	Pull-up register for SCL: N.M. *5
JP1	Pull-up register for DRI: N.M. *5
CN1	Pin header: 2.54 mm pitch, Φ0.8

*5 N.M. = No Mount

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Notes

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