Magnetometer

BM1422AGMV-EVK-001 Manual

BM1422AGMV-EVK-001 is an evaluation board for BM1422AGMV which is ROHM MI sensor. This User's Guide is written about how to use BM1422AGMV-EVK-001 by using SensorShield.*1. *1 SensorShield is sold as part of SensorShield-EVK-001.

Preparation

- Arduino Uno 1pcs
- Personal Computer installed Arduino IDE 1pcs
  - Requirement : Arduino 1.6.7 later
  - Please use Arduino IDE downloaded from http://www.arduino.cc/
- USB cable for connecting Arduino and PC 1pcs
- SensorShield 1pcs
- BM1422AGMV-EVK-001 1pcs

Setting

1. Connect Arduino and SensorShield (Figure 1)

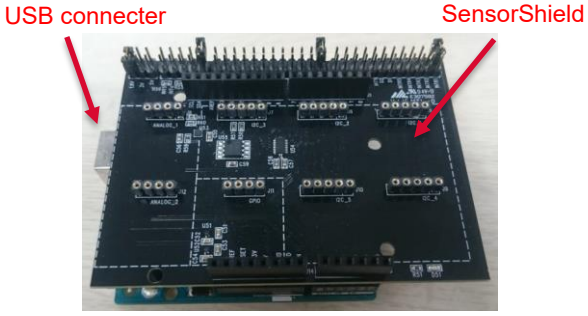

Figure 1. Connection between Arduino and SensorShield

2. Connect BM1422AGMV-EVK-001 to the socket of I2C_1 on SensorShield (Figure 2)
3. Set Voltage of SensorShield to 1.8V or 3.0V (Figure 2)
4. Set Interrupt of SensorShield to INTR1 (Figure 2)

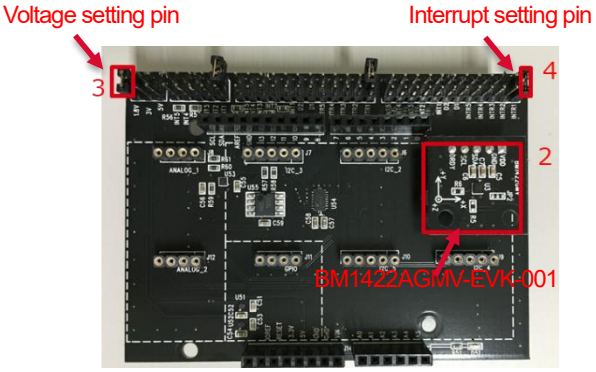

Figure 2. Connection between BM1422AGMV-EVK-001 and SensorShield

5. Connect PC and Arduino with USB cable
6. Download BM1422AGMV.zip from http:www.rohm.com/web/global/sensor-shield-support
7. Launch Arduino IDE
8. Select[Sketch]->[Include Library]->[Add.ZIP library...], install 6 ZIP files
9. Select[File]->[Examples]->[BM1422AGMV]->[example]->[BM1422AGMV]

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Measurement

1. Check the red frame contents. Board is "Arduino/Genuino Uno". Port is COMxx (Arduino/Genuino Uno). COM port number is different in each environment.

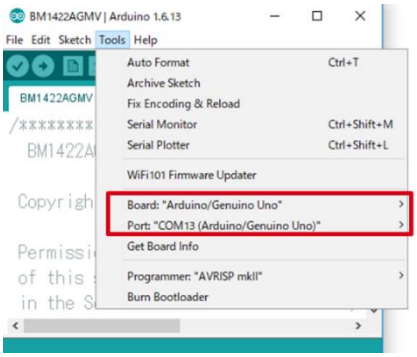

Figure 3. COM Port setting

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

Figure 4. Uploading

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

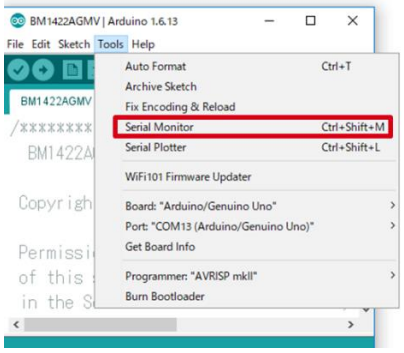

Figure 5. Tools Setting

5. Check log of Serial Monitor (Figure 6)

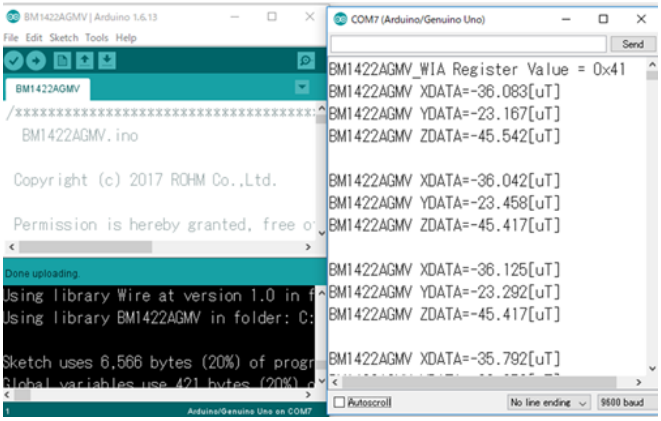

Figure 6. Serial Monitor

Board Information

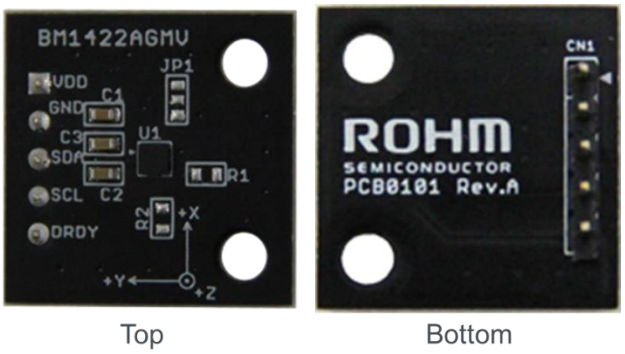

Figure 7. Picture of the board

Parts number	Function
C1	Bypass capacitor for DVDD(0.01uF)
C2	Bypass capacitor for VREG(1uF)
C3	Bypass capacitor for AVDD(1uF)
R1	Pull-up register for SCL(N.M.)
R2	Pull-up register for SDA(N.M.)
JP1	Jumper to change slave address

※N.M. = No Mount

Table 1. Parts information

Notes

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