

Hall Effect Sensor

BD7411G-EVK-001 Manual

BD7411G-EVK-001 is an evaluation board for BD7411G, which is ROHM hall effect sensor. This User's Guide is about how to use BD7411G-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

- BD7411G-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/>

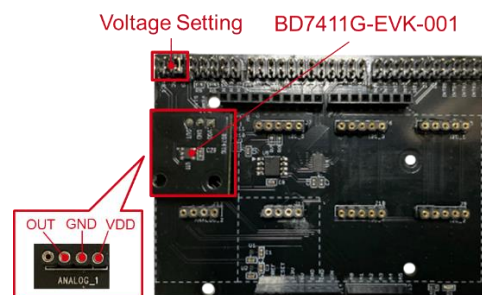


Figure 2. Voltage Setting and Connection of Shield for Arduino

Setting

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

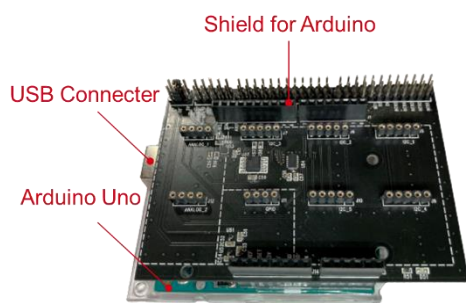


Figure 1. Connection of Arduino Uno and Shield for Arduino

2. Connect BD7411G-EVK-001 to the socket of I2C area on Shield for Arduino. (Figure 2)
3. Set the voltage of Shield for Arduino to 5V. (Figure 2)

4. Connect Arduino Uno to Computer using USB cable.
5. Get BD7411G 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 BD7411G Software. (Figure 3)

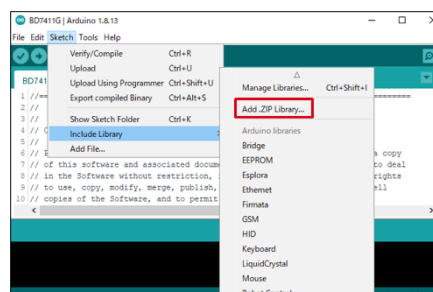


Figure 3. Software Installation

8. Select [File] -> [Examples] -> [Examples from custom libraries], then BD7411G Software.

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.

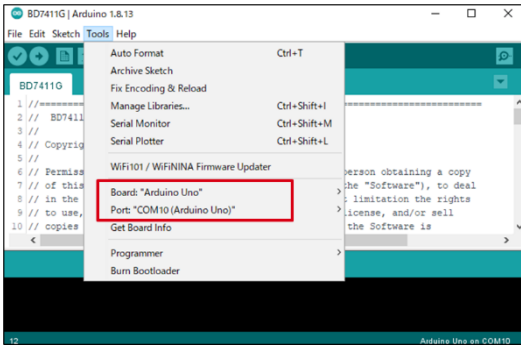


Figure 4. Board and Port Setting

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)

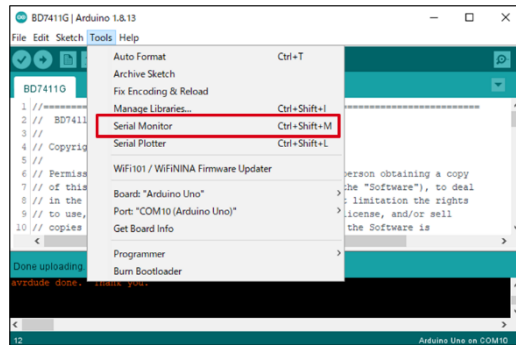


Figure 6. Selecting Serial Monitor

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

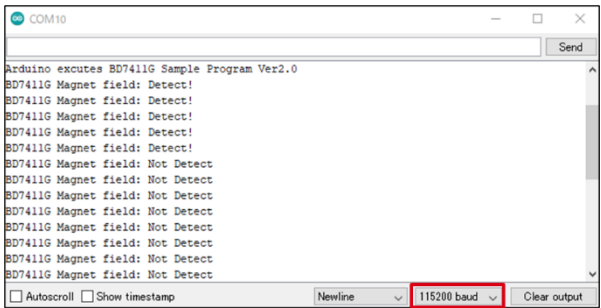


Figure 7. Example of Serial Monitor

Board Information *4

*4 Board Information is subject to change without notice.

- Communication Interface: Analog
- Selectable Voltage of Shield for Arduino: 5V
- Supply Voltage for VDD: 4.5V – 5.5V
- Operating Temperature Range: -40°C - +85°C

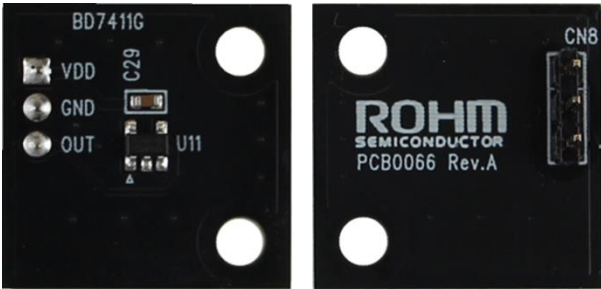


Figure 8. Board Pictures

Table 1. Parts Information

Parts Number	Description
U11	IC: BD7411G
C29	Bypass capacitor for VDD: 0.1uF
CN8	Pin header: 2.54 mm pitch, Ø0.8

Notes

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