Temperature Sensor

BH1900NUX-EVK-001 Manual

BH1900NUX-EVK-001 is an evaluation board for BH1900NUX, which is a ROHM Temperature Sensor. This User's Guide is about how to use BH1900NUX-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
- BH1900NUX-EVK-001 1pc

Setting

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

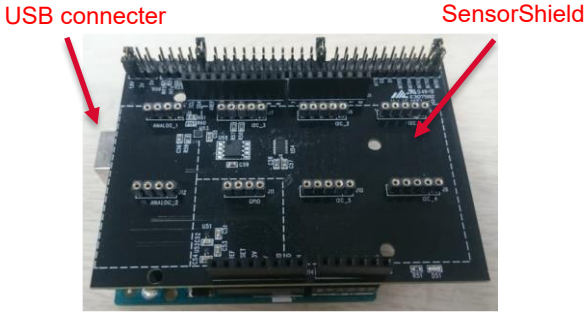


Figure 1. Connection between the Arduino and the SensorShield

2. Connect BH1900NUX-EVK-001 to the socket of I2C area on the SensorShield (Figure 2)
3. Set Voltage of the SensorShield to 3.0V (Figure 2)

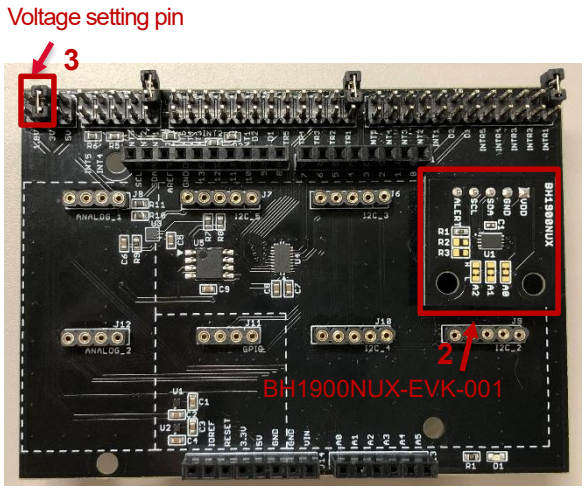


Figure 2. Connection between BH1900NUX-EVK-001 and the SensorShield

4. Connect the Arduino to the PC using a USB cable
5. Download BH1900NUX.zip from the link below: http://www.rohm.com/web/global/sensor-shield-support
6. Launch Arduino IDE
7. Select [Sketch] -> [Include Library] -> [Add.ZIP library...], install BH1900NUX.zip
8. Select [File] -> [Examples] -> [BH1900NUX] -> [example] -> [BH1900NUX]

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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.

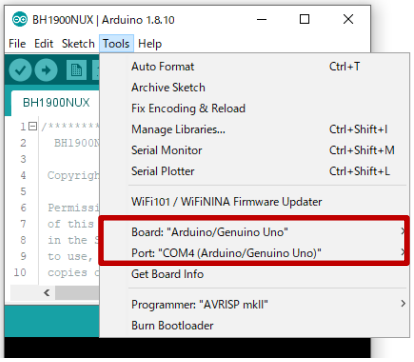


Figure 3. Board and COM Port setting

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)

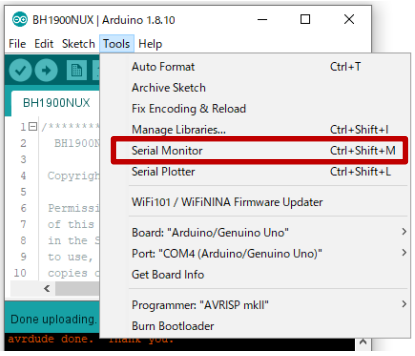


Figure 5. Tools Setting

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

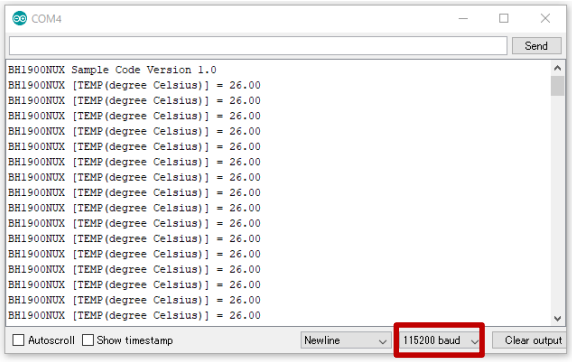
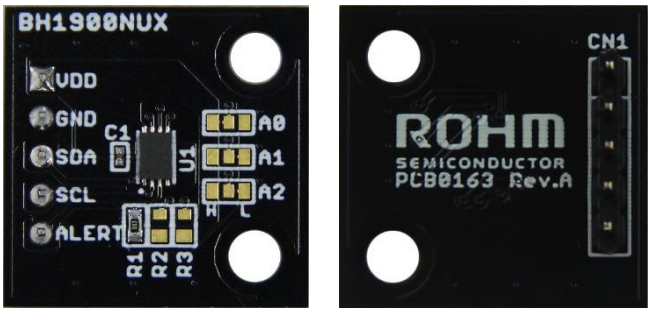


Figure 6. Serial Monitor

Board Information



Top Bottom

Figure 7. Picture of the board

Parts number	Function
C1	Bypass capacitor for VDD (0.1uF)
R1	Pull-up register for ALERT (4.7kΩ)
R2	Pull-up register for SCL (N.M.)
R3	Pull-up register for SDA (N.M.)
A0	PAD to change slave address：Default = H (VDD)
A1	PAD to change slave address：Default = L (GND)
A2	PAD to change slave address：Default = L (GND)

※N.M. = No Mount

Table 1. Parts information

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