

## Sensor Evaluation Board

# Shield-EVK-001 Manual

Shield-EVK-001 is a Shield, which connects Arduino and ROHM Sensor Boards. Shield-EVK-001 will be referred to as "SensorShield" on this manual. This User's Guide is about how to use SensorShield.

## Board Information

- Connection Board between Arduino and ROHM Sensor Board (Figure 1, 2)
- Size: 88mm x 63mm
- Five I2C Sensors, One I/O Sensor and Two Analog Sensors can be controlled
- 5V-3.0/1.8V Level Shifter
  - GPIO : FAIRCHILD FXMA108
  - I2C : NXP PCA9306
  - I2C pull-up register is implemented

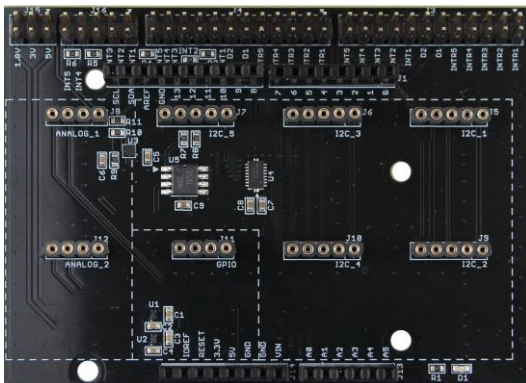


Figure 1. SensorShield (Top)

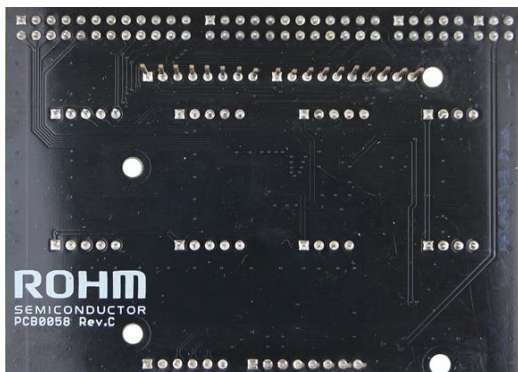


Figure 2. SensorShield (Bottom)

## 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
- ROHM Sensor Board, which is not attached 1pc

## Setting

1. Connect the SensorShield to the Arduino (Figure 3)

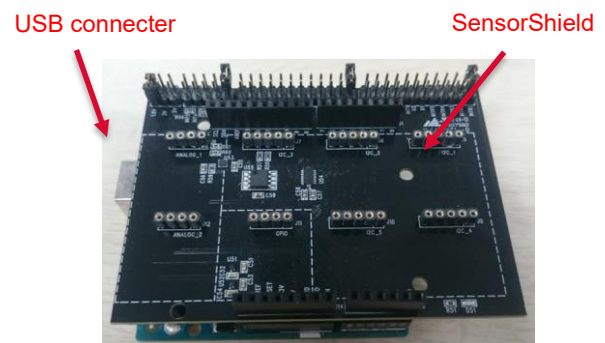


Figure 3. Connection between the Arduino and the SensorShield

2. Check the connection type of ROHM Sensor Board and connect it to the corresponding type on the SensorShield (Figure 4)

- Set voltage of the SensorShield to the corresponding supply voltage range of each ROHM Sensor Board. (Figure 4)

Voltage setting pin

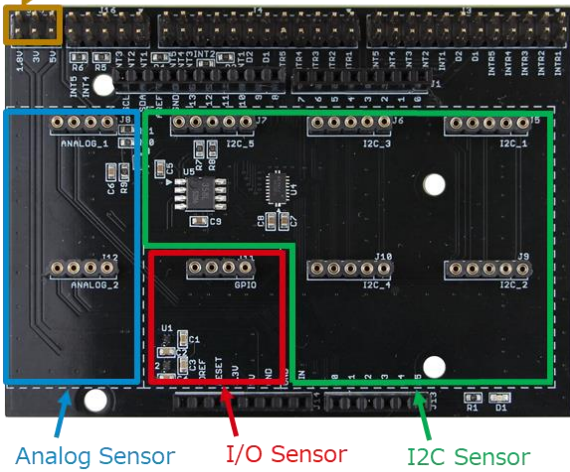


Figure 4. Voltage settings and Connection of the Sensors

- Connect the Arduino to the PC using a USB cable

## Software Setting and Measurement

- Download the program of ROHM Sensor Board from the link below:  
<http://www.rohm.com/web/global/sensor-shield-support>
- In regards to the measurement procedure of each sensor board, refer to the manual of ROHM Sensor Board.

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