

Capacitive switch controller

# BU21078MUV-EVK-001 Manual

BU21078MUV-EVK-001 is an evaluation board for BU21078MUV, which is a ROHM Capacitive switch controller. This User's Guide is about how to use BU21078MUV-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
- BU21078MUV-EVK-001 1pc

## Setting

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

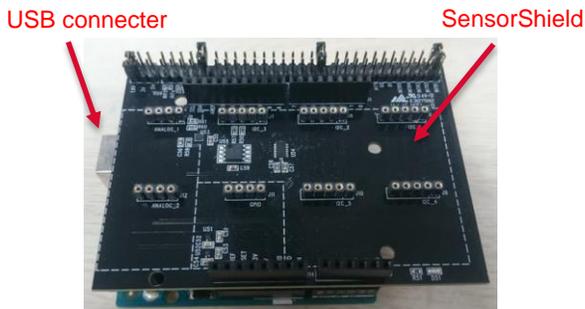


Figure 1. Connection between the Arduino and the SensorShield

2. Connect BU21078MUV-EVK-001 to the socket of I2C area on the SensorShield (Figure 2)
3. Set Voltage of the SensorShield to 5.0V (Figure 2)

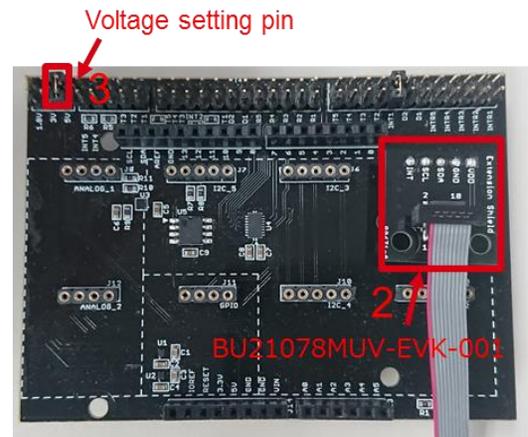


Figure 2. Connection between BU21078MUV-EVK-001 and the SensorShield

4. Connect the Arduino to the PC using a USB cable
5. Download BU21078MUV.zip from the link below: <http://www.rohm.com/web/global/sensor-shield-support> (Software is subject to change without no notice.)
6. Launch Arduino IDE
7. Select [Sketch]->[Include Library]->[Add.ZIP library...], install BU21078MUV.zip
8. Select [File]->[Examples]->[BU21078MUV]->[example]->[BU21078MUV]

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.

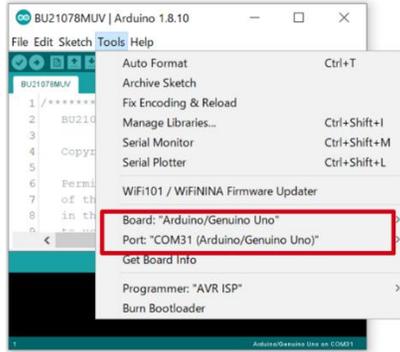


Figure 3. Board and COM Port setting

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

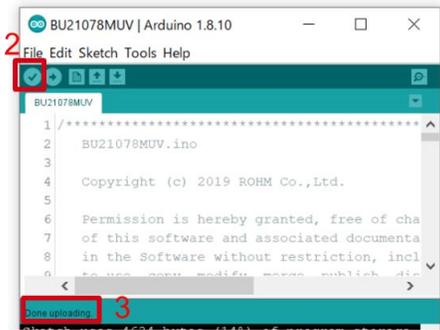


Figure 4. Uploading

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

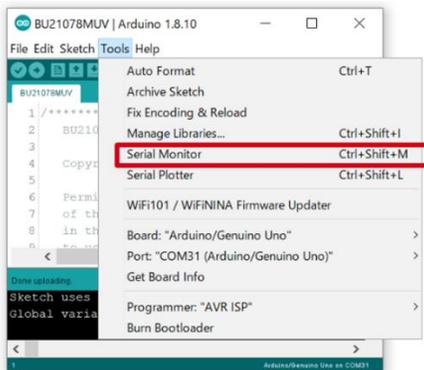


Figure 5. Tools Setting

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

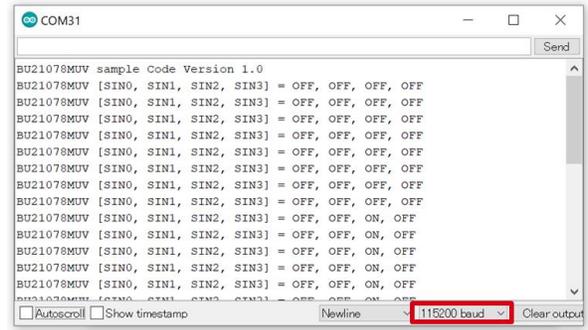
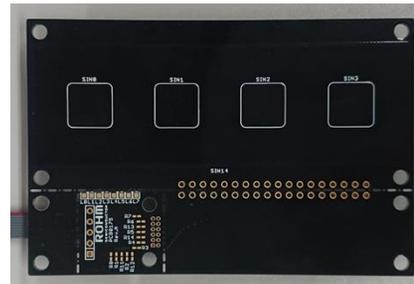
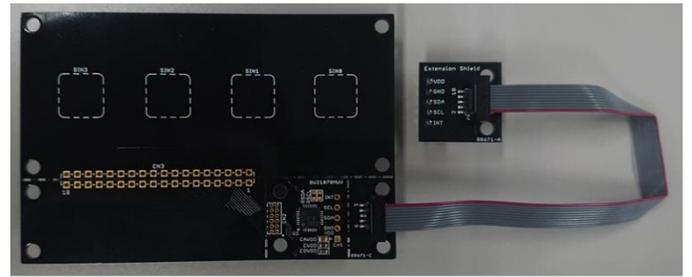


Figure 6. Serial Monitor

Board Information



Top



Bottom

Figure 7. Picture of the board

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

Parts number	Function
R0-R7, R11-R14	Resistance for ESD protection(N.M.) (Shorted between PADS)
L1-L7	Output PAD for LED control
RSDA	Pull-up register for SDA(N.M.)
RSCL	Pull-up register for SCL(N.M.)
CAVDD	Capacitor for AVDD(2.2uF)
CVDD	Bypass capacitor for VDD(0.1uF)
CDVDD	Capacitor for DVDD(1.0uF)

※N.M. = No Mount

Table 1. Parts information

## Notes

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