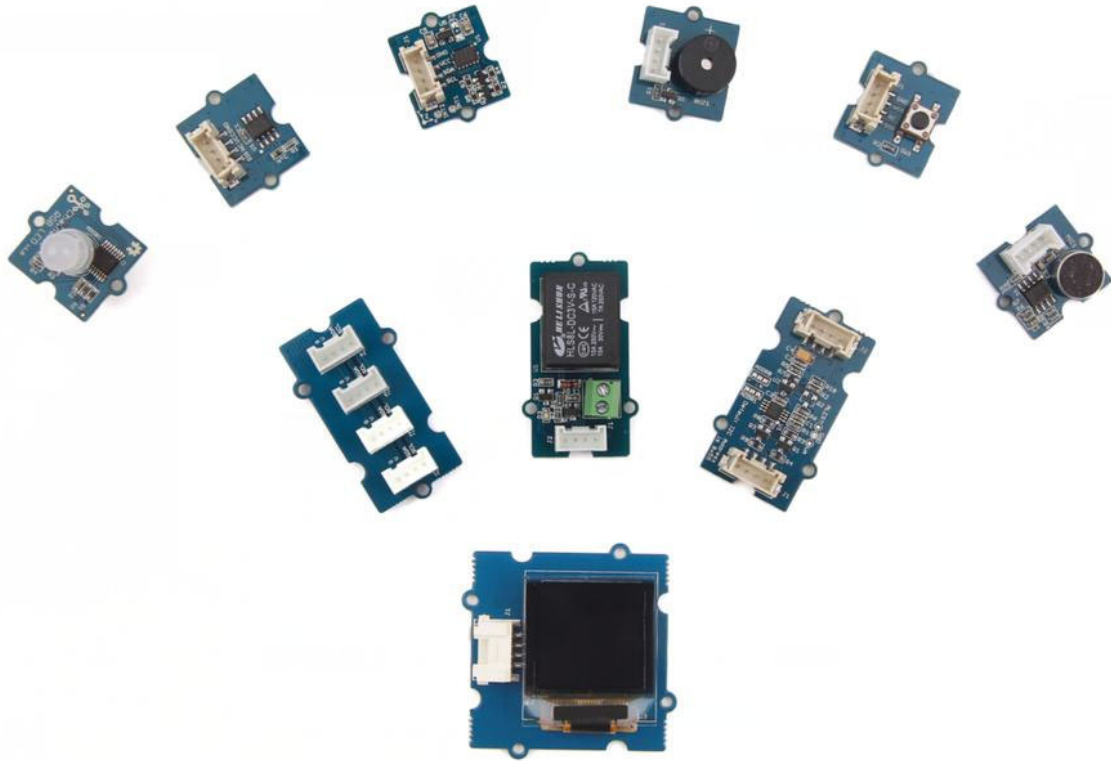


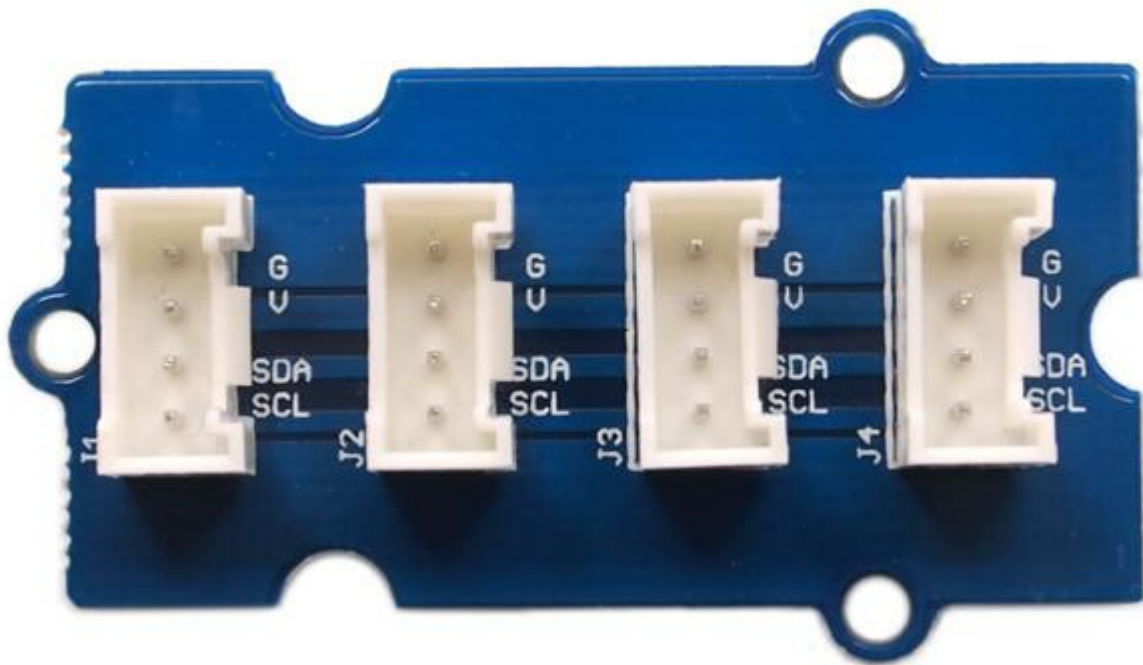
Grove Starter Kit for Seeed Studio BeagleBone® Green



Grove Starter Kit for BeagleBone® Green is an entry-level kit for beginners, which can help you explore BBG and create innovative projects. It's a best choice for novice to develop some cool projects and build prototype built in BBG. Here are a collection of sensors, actuators and shields that we have had success using with BeagleBone® Green.

Part List

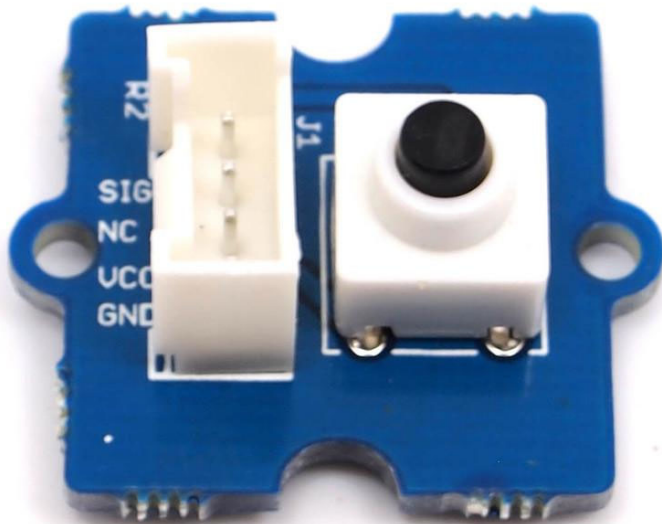
Grove - I2C Hub



I2C Hub Grove is an extension Grove module for connecting multiply I2C devices to Grove I2C socket.

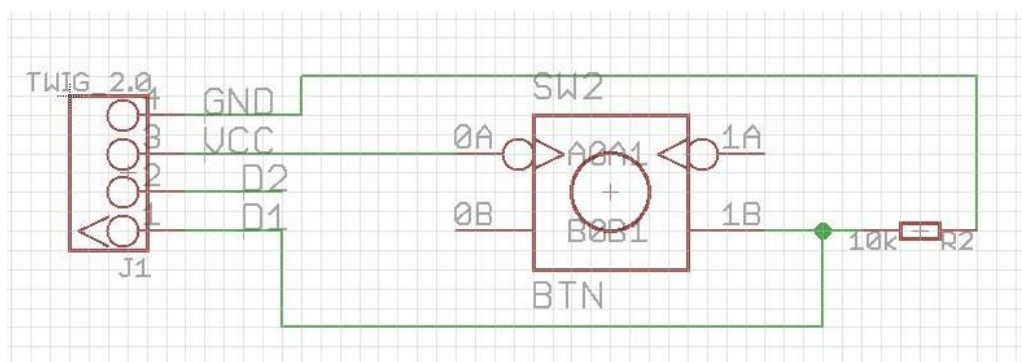
It can use with Universal 4 Pin to X2 4 Pin cable and connects up to 7 I2C devices which may cover most developing purpose.

Grove - Button

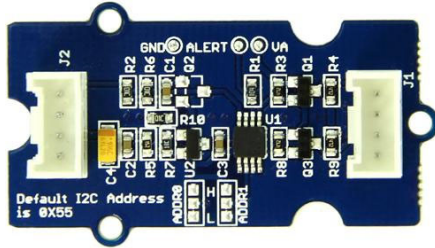


This version of button Grove contains one independent button, which is configured with pull-down resistor – ready for use with our microcontrollers as digital input. The button signals the SIG(D1) wire, NC(D2) is not used on this Grove.

ButtonSchematic



Grove - I2C ADC



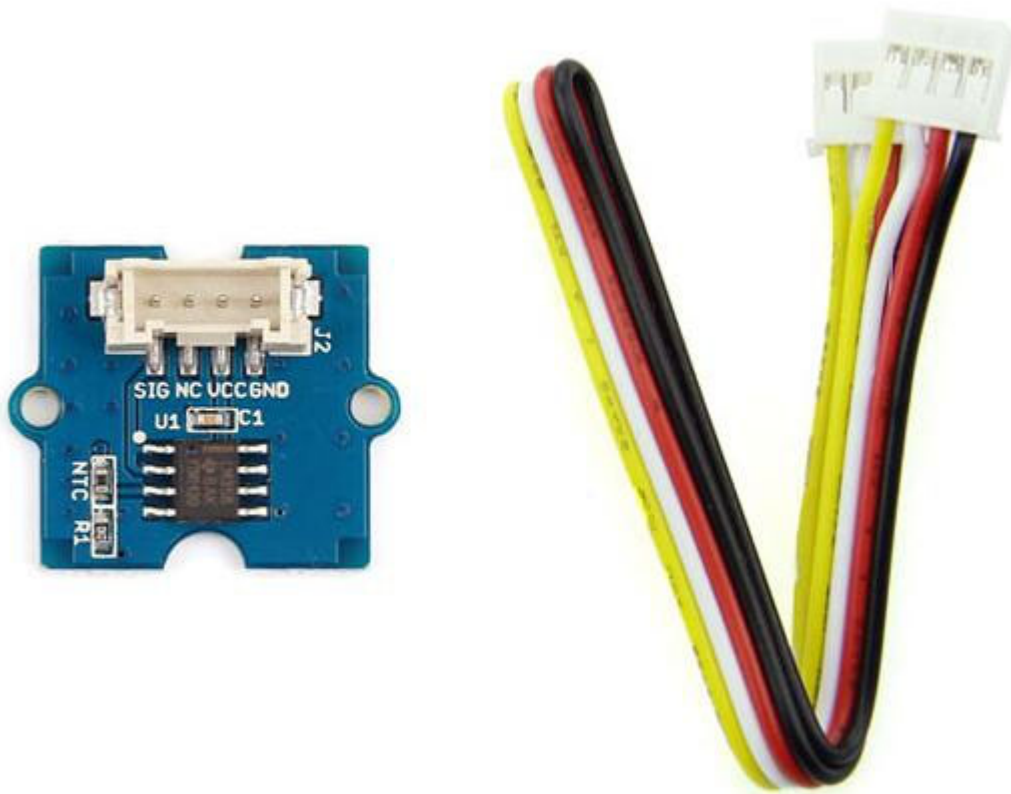
Grove - I2C ADC is a 12-bit precision ADC module based on ADC121C021.

It helps you increase the accuracy of value collected from analog sensor by providing a constant reference voltage.

Because its address is changeable, you can use up to 9 I2C ADC at the same time at most.

At the other hand, this module provides auto sleep function which lowers the power consumption considerably.

Grove - Temperature Sensor



The Grove - Temperature Sensor uses a thermistor to detect the ambient temperature.

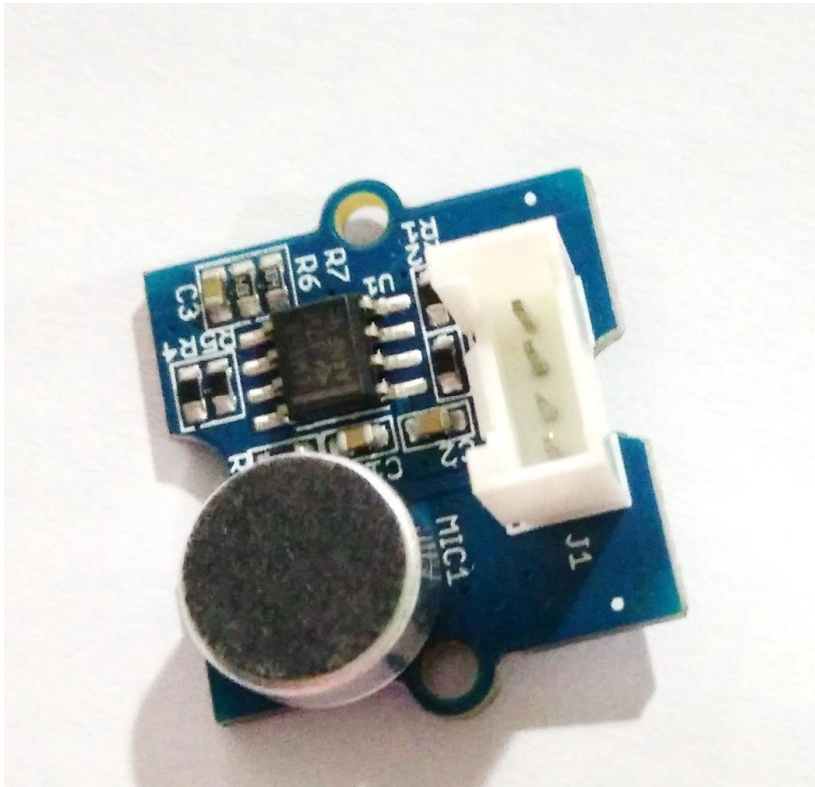
The resistance of a thermistor will increase when the ambient temperature decreases.

It's this characteristic that we use to calculate the ambient temperature.

The detectable range of this sensor is -40 - 125°C, and the accuracy is $\pm 1.5^\circ\text{C}$.

And you should plug it to Grove - I2C ADC J2 Port.

Grove - Sound Sensor

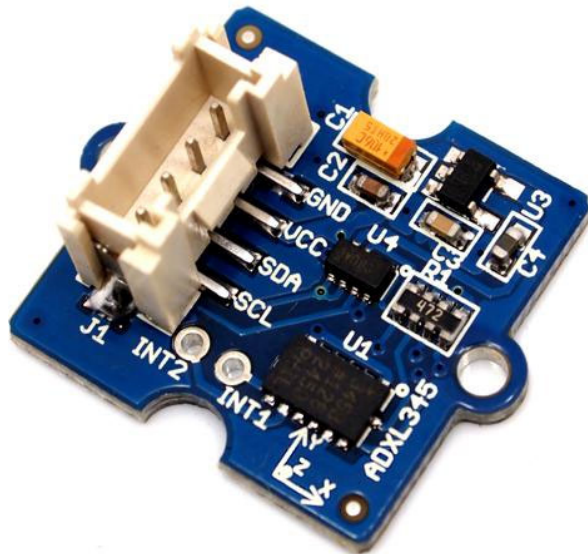


Grove - Sound Sensor can detect the sound strength of the environment.

The main component of the module is a simple microphone, which is based on the LM358 amplifier and an electret microphone.

This module's output is analog and you should plug it to Grove - I2C ADC J2 Port.

Grove - 3-Axis Digital Accelerometer($\pm 16g$)

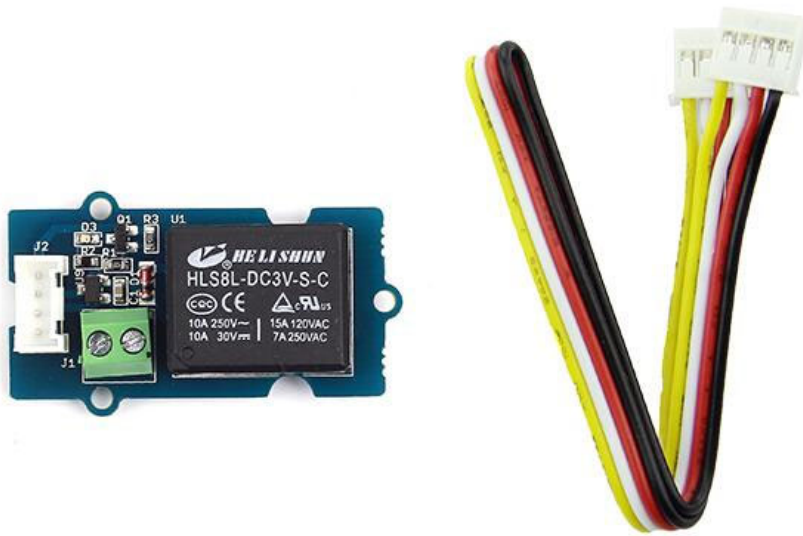


This is a high resolution digital accelerometer providing you at max 3.9mg/LSB resolution and large $\pm 16g$ measurement range.

It's based on an advanced 3-axis IC ADXL345. Have no worry to implement it into your free-fall detection project, cause it's robust enough to survive up to 10,000g shock.

Meanwhile, it's agile enough to detect single and double taps. It's ideal for motion detection, Gesture detection as well as robotics.

Grove - Relay

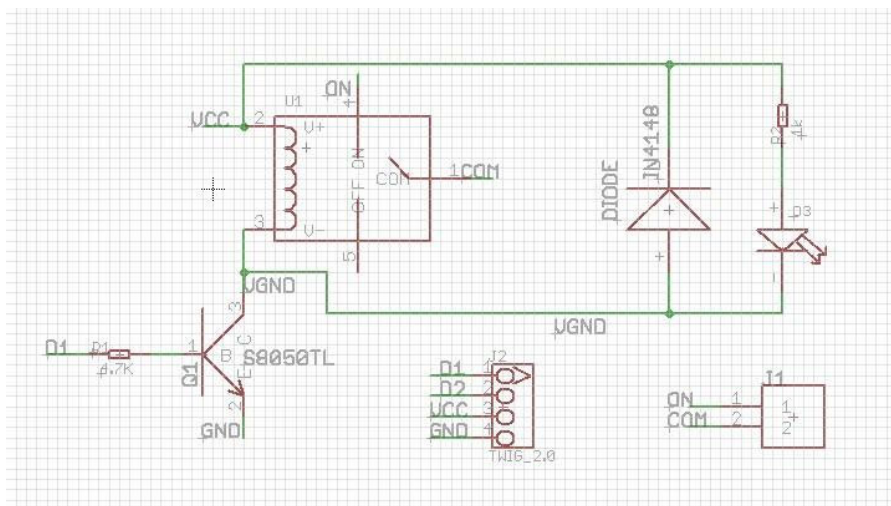


The Relay Grove is a digital normally open switch that controls a relay capable of switching much higher voltages and currents than your BBG boards. When set to HIGH, the LED will light up and the relay will close allowing current to flow. The peak voltage capability is 250V at 10 Amps.

Caution

Please exercise great care when working with mains voltages— if in doubt contact a professional such as a licensed electrician for help.

Relay Schematic

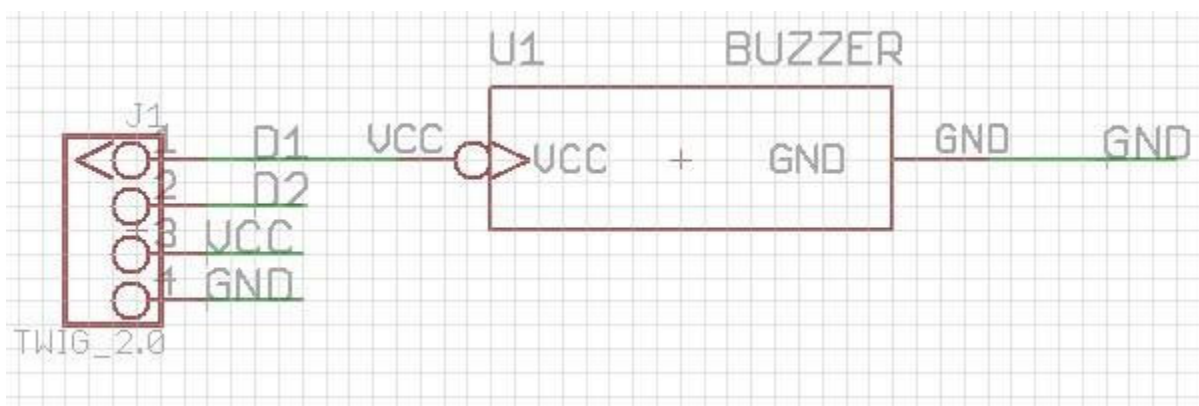


Grove - Buzzer



This is a simple yet enjoyable Grove to use. The piezo can be connected to digital outputs, and will emit a tone when the output is high. Alternatively it can be connected to an analog pulse-width modulation output to generate various tones and effects.

Grove Buzzer Schematic



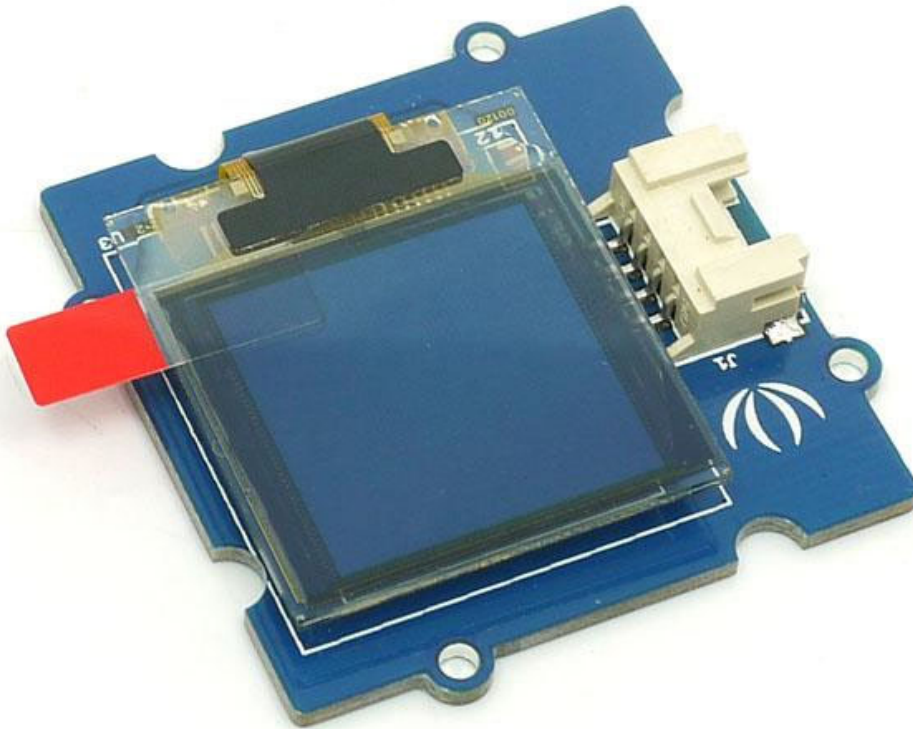
Grove - Chainable RGB LED



Chainable RGB LED is based on P9813 chip which is a full-color light source LED driver chip, and can provide constant current drive and modulated output of 256 gray.

Transmission by wire (DATA and CLK), built-in recycling, can enhance the transmission distance.

Grove - OLED Display 0.96"



It is a 16 color grayscale 96×96 dot matrix OLED display module with Grove compatible 4pin I2C interface.

Grove - OLED 96 x 96 is constructed with 96 x 96 dot matrix OLED module LY120 and SSD1327 driver IC.

Comparing to LCD, OLED screens are more competitive, which has a number of advantages such as high brightness, self-emission, high contrast ratio, slim / thin outline, wide viewing angle, wide temperature range, and low power consumption.