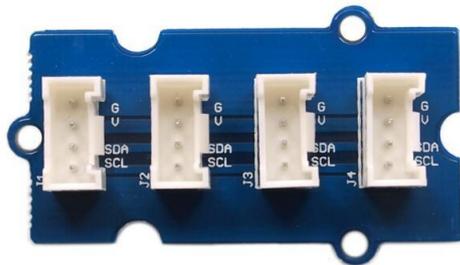


Grove - I2C Hub



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.

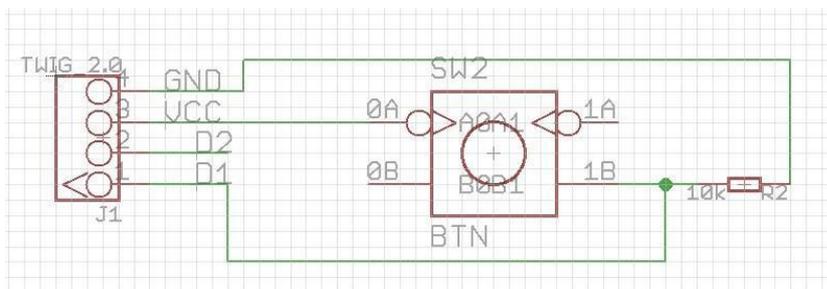
If you want to know more info about this module please click [here](#).

Grove - Button

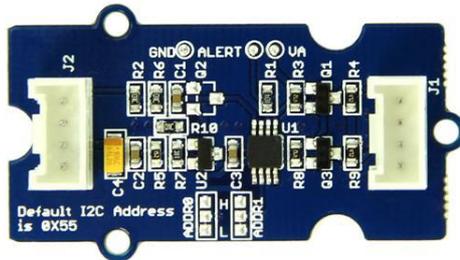


This new version of button Grove contains one independent button, which are configured with pull-down resistor – ready for use with our microcontrollers as digital input. The button signals the SIG(D1) wire, NC(D2) is not used on this Grove.

Button Schematic



Grove - I2C ADC



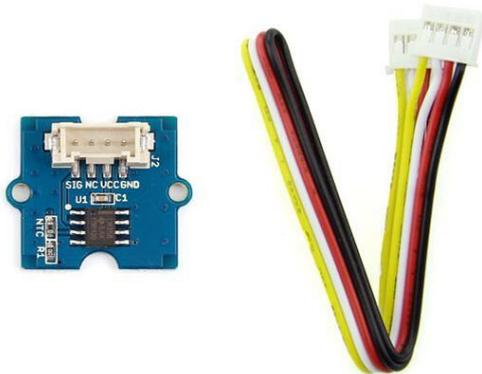
Grove - I2C ADC is a 12-bit precision ADC module based on ADC121C021.

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. If you want to know more info about this module please click [here](#).

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. If you want to know more info about this module please click [here](#).

Grove - Sound Sensor

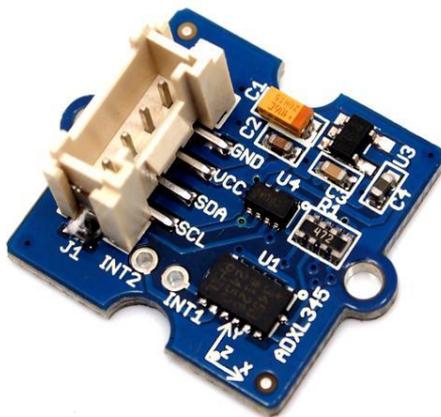


Grove - Sound Sensor can detect the sound strength of the environment.

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. If you want to know more info about this module please click [here](#).

Grove - 3-Axis Digital Accelerometer(±16g)



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

It's base 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.

If you want to know more info about this module please click [here](#).

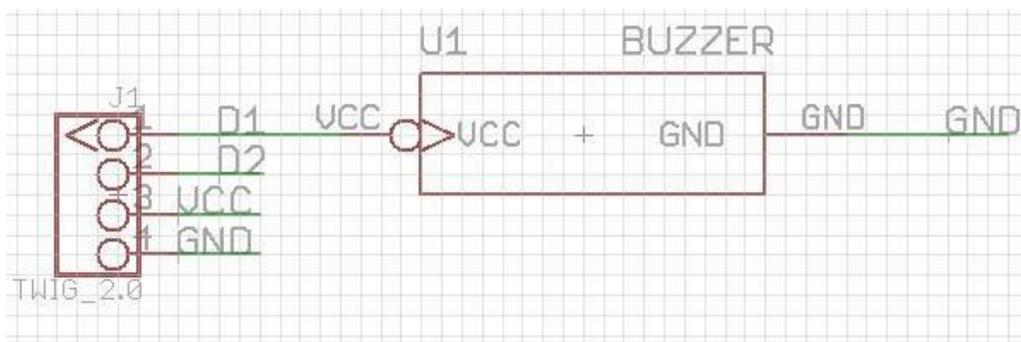


This is a simple yet enjoyable Grove to use.

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

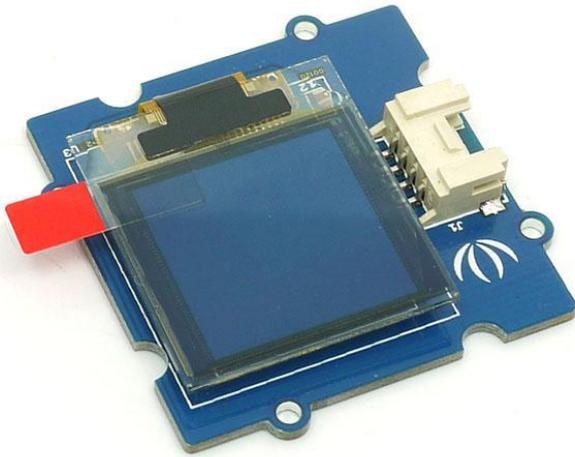


Chainable RGB LED is based on P9813 chip which is a full-color light source LED driver chip, and can provide constant current drive and modulated output of 256 gray.

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

If you want to know more info about this module please click [here](#).

Grove - OLED Display 0.96"



It is a 16 color grayscale 96x96 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.

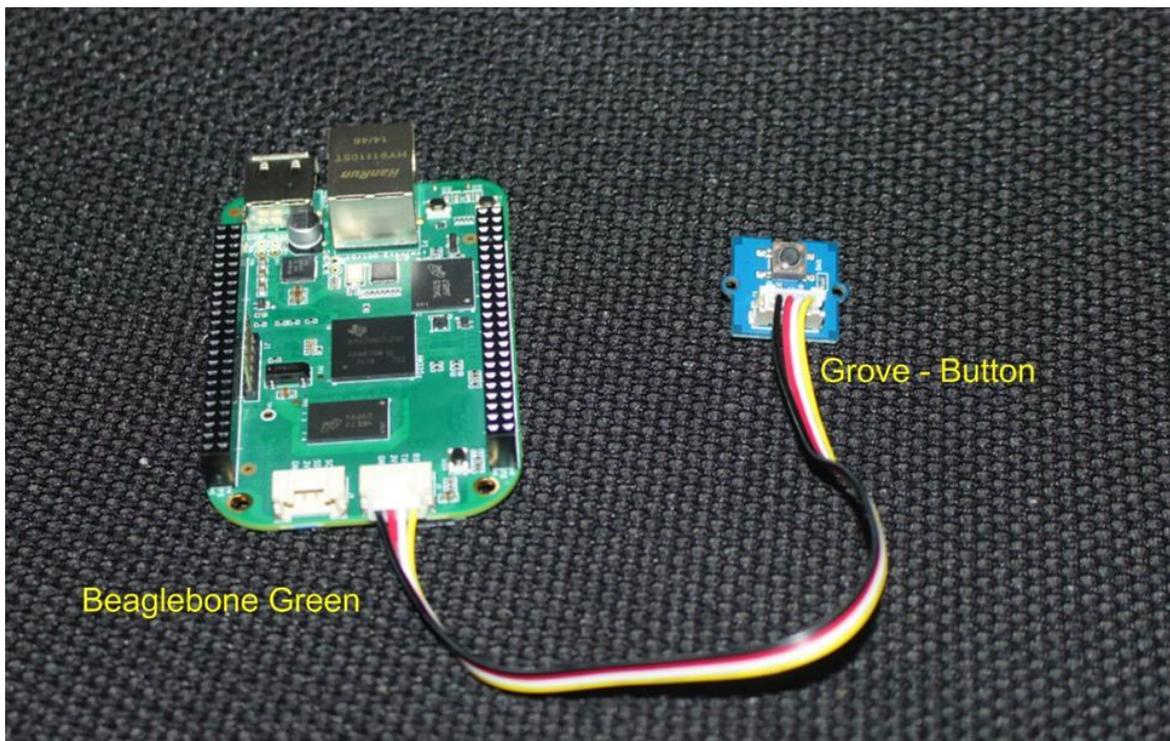
If you want to know more info about this module please click [here](#).

Examples

To begin editing programs that live on your board, you can use the Cloud9 IDE. As a simple exercise to become familiar with Cloud9 IDE, creating a simple application to blink one of the 4 user programmable LEDs on the BeagleBone is a good start.

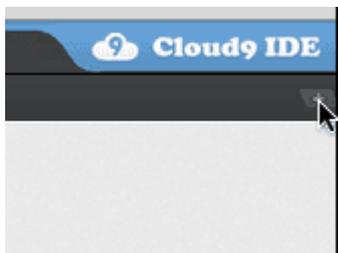
If this is your first time to use Cloud9 IDE, please follow this [link](#).

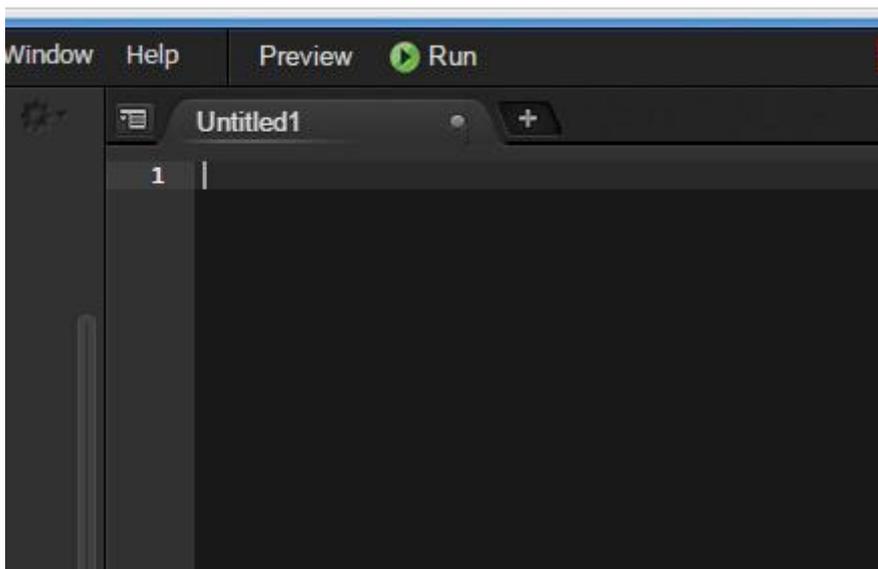
How to use Grove - Button on BBG



Step1: Set the Grove - UART socket as a Grove - GPIO Socket, just follow this [link](#).

Step2: Click the "+" in the top-right to create a new file.





Step3: Copy and paste the following code into the new tab

```
1import time
2import Adafruit_BBIO.GPIO as GPIO
3
4# Note: Use P9_22(UART2_RXD) as GPIO.
5# Connect the Grove Button to UART Grove port of Beaglebone Green.
6Button = "P9_22" # GPIO P9_22
7GPIO.setup(Button, GPIO.IN)
8
9if __name__ == '__main__':
10    while True:
11        if GPIO.input(Button):
12            print "Button is pressed."
13            time.sleep(1)
14        else:
15            print "Button is unstuck."
16            time.sleep(1)
```

Step4: Save the file by clicking the disk icon and giving the file a name with the .py extension.

Step5: Run the code.