Grove - LCD RGB Backlight

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Version： 1.0

Wiki: http://www.seeedstudio.com/wiki/Grove_-_LCD_RGB_Backlight

Bazaar: http://www.seeedstudio.com/depot/Grove-LCD-RGB-Backlight-p-1643.html

Document Revision History

Revision	Date	Author	Description
1.0	Sep 21, 2015	Victor.He	Create file

Contents

Disclaimer

For physical injuries and possessions loss caused by those reasons which are not related to product quality, such as operating without following manual guide, natural disasters or force majeure, we take no responsibility for that.

Under the supervision of Seeed Technology Inc., this manual has been compiled and published which covered the latest product description and specification. The content of this manual is subject to change without notice.

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1. Introduction

Done with tedious mono color backlight? This Grove enables you to set the color to whatever you like via the simple and concise Grove interface. It takes I2C as communication method with your microcontroller. So number of pins required for data exchange and backlight control shrinks from ~10 to 2, relieving IOs for other challenging tasks. Besides, Grove - LCD RGB Backlight supports user-defined characters. Want to get a love heart or some other foreign characters? Just take advantage of this feature and design it!

This product is a replacement of Grove - Serial LCD. If you are looking for primitive 16x2 LCD modules, we have green yellow backlight version and blue backlight version on sale also.
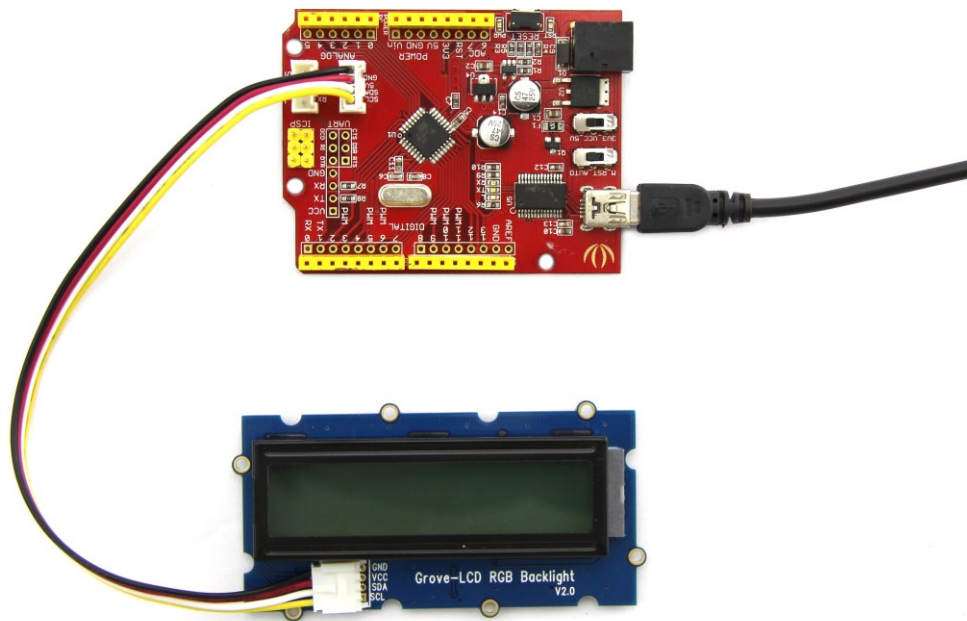
2. Specification

Input Voltage	5V
Operating Current	<60mA
CGROM	10880 bit
CGRAM	64*8 bit
Colorful RGB Backlight	
Built-in English and Japanese fonts	
I2C communication, uses only two IOs	
Automatic power-on reset	
Suli-compatible Library	

3. Demonstration

This demonstration will show you how to use Grove - LCD RGB Backlight, we need a Seeeduino V3.0 else.

3.1 Hardware Installation

Hardware installation is very easy, because there's an I2C Grove in Seeeduino, so what we need to do is connect it to I2C Grove via a Grove cable.
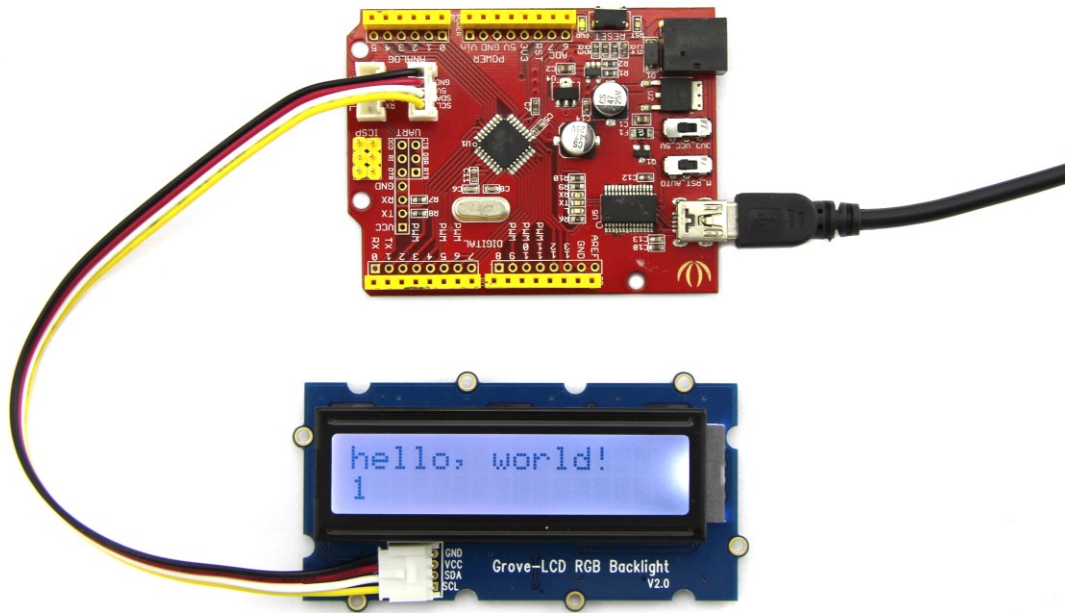

3.2 Download Code and Upload

You can download the demo code in Github, click here, then extract it to anywhere.

If you have some problem with this step, please refer to Getting Start with Seeeduino
there is a Hello World example in the library, open it, and upload to Seeeduino V3.0.
Then you can see "Hello world" on the first row, and second row will print the number of second since reset.

3.3 Change Color of Backlight

One of Grove - LCD RGB Backlight's most important feature is: you can change the color backlight, and it's a very simple thing, just use the following function:

```
void setRGB(int r, int g, int b);
```
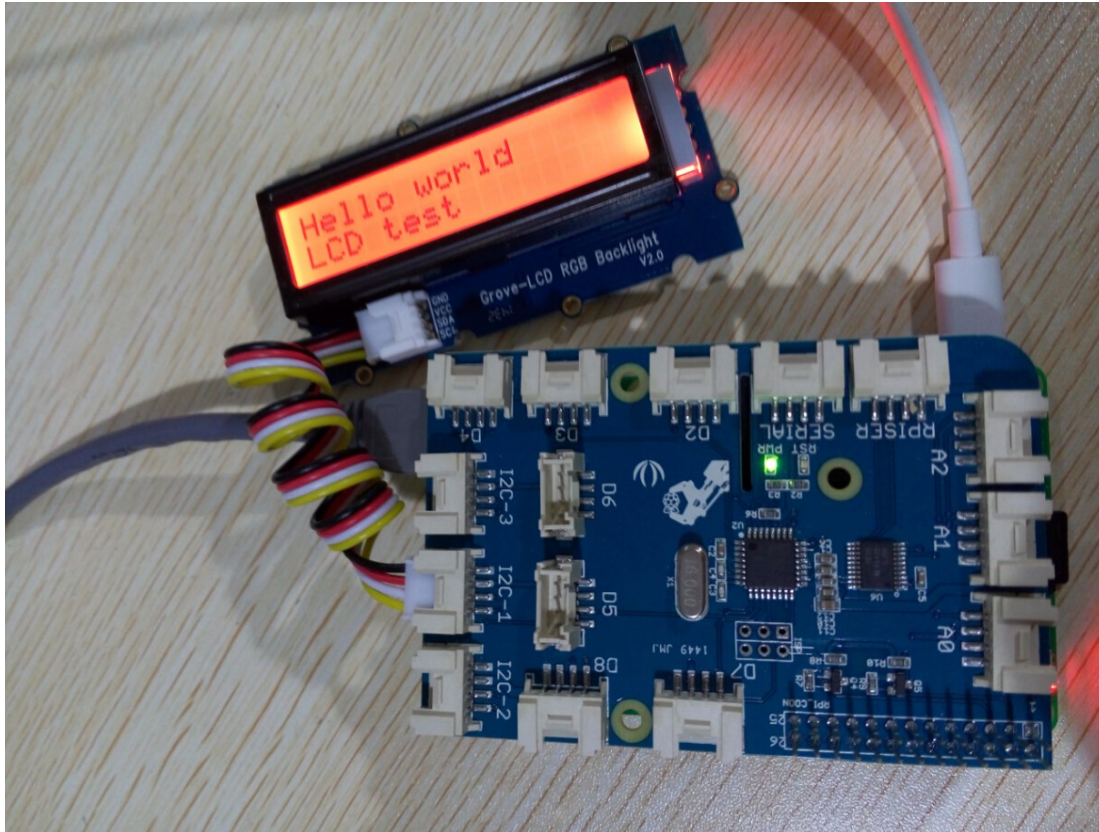
Then let's try a Red backlight.

Modify the code about color into:

```
const int colorR = 255;
const int colorG = 0;
const int colorB = 0;
```

Upload the code again, woo, see the backlight turn to Red? Then why not try another color? Whatever you like.

3.4 With Raspberry Pi

This example will change backlight color and display text. You should connect to GrovePi+ with it like the following picture.

```
# Grovepi + grove RGB LCD module

# Example for using the Grove I2C color LCD
from grove_rgb_lcd import *

while(True):
setText("Hello world\nLCD test")
setRGB(0,128,64)
for c in range(0,255):
setRGB(c,255-c,0)
time.sleep(0.01)
setRGB(0,255,0)
setText("Bye bye, this should wrap")
time.sleep(1.5)
```

3.4.1   Run The Program

Find the path to the file(According to your own path)

```
cd GrovePi/Software/Python/grove_rgb_lcd/
```

Run program:

```
sudo python example.py
```

4. Related Projects

The best way to learn something, is to create a project with it.

Recipe Community is a place which gathers a lot of amazing projects with step-by-step tutorials. Makers in the community have made a lot of awesome projects with the Grove - LCD RGB Backlight, check this out!
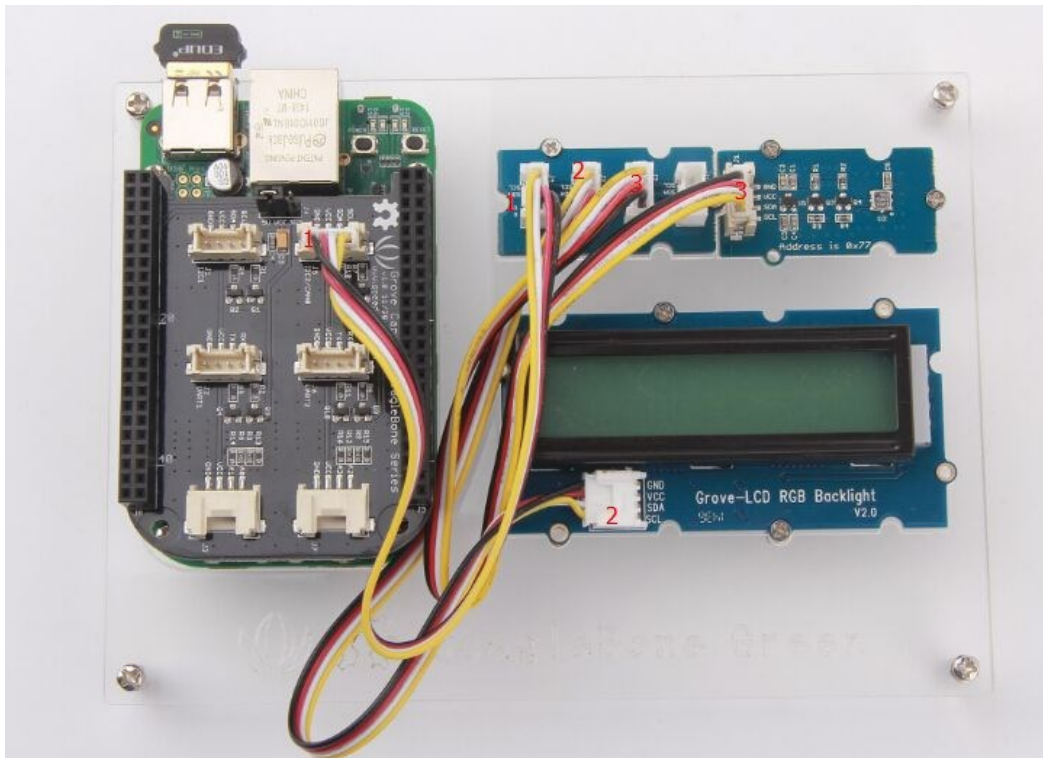
4.1 Pringles Can antenna with a LinkIt ONE

Make a focused antenna with a pringles can.

I want to make it.

4.2 A Smart home monitoring equipment by BBG

Get to know the temperature and pressure around you with a smart DIY home monitor

I want make one!

Find out even more awesome projects on Recipe.

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Born with the spirit of making and sharing, that is what we believe makes a maker.

And only because of this , the open source community can be as prosperous as it is today.

It does not matter what you are and what you have made, hacker, maker, artist and engineers,

as long as you start sharing your works with others, you are being part of the open source community and you are making your contributions.

Now share you awesome projects with us on Recipe, and win a chance to become the **Core User of Seeed**.

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Get more information about Core User please email to: **recipe@seeed.cc**

6. Resources

Library

LCD Datasheet

BackLight Datasheet

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Seeed Studio](#):
  [104030001](#)