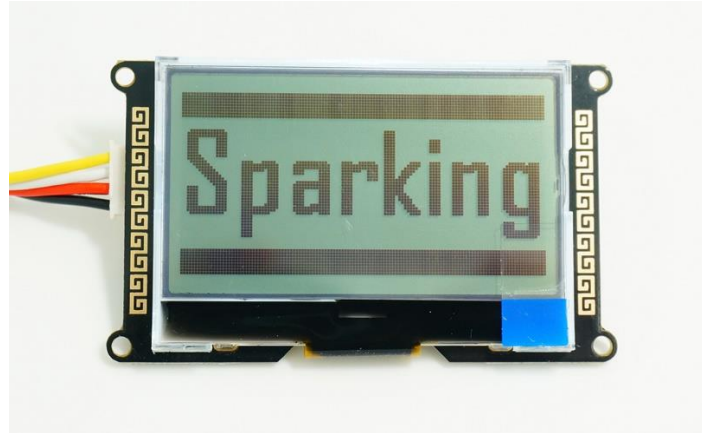# I2C LCD

I2C_LCD is an easy-to-use display module, It can make display easier. Using it can reduce the difficulty of make, so that makers can focus on the core of the work.

We developed the Arduino library for I2C_LCD, user just need a few lines of the code can achieve complex graphics and text display features. It can replace the serial monitor of Arduino in some place, you can get running informations without a computer.

More than that, we also develop the dedicated picture data convert software (bitmap converter)now is available to support PC platform of windows, Linux, Mac OS. Through the bitmap convert software you can get your favorite picture displayed on I2C_LCD, without the need for complex programming.

I2C_LCD can provide you with a very convenient way of make. Enjoy yourself!

Product Version

I2C_LCD (With universal Grove cable)

I2C_LCD (With conversion Grove cable)

Features

- Only 2 Arduino pins are occupied (Use I2C interface).
- Supports standard I2C mode (100Kbit/s) and fast I2C mode (400Kbit/s).
- Compatible with multiple communication logic levels: 2.8~5VDC.
- Arduino library supported, use a line of code to complete the display.
- Integrate 7 sizes of ASCII fonts, 5 graphics functions.
- Provide dedicated picture data convert software (Bitmap Converter).

- Most of the complex operation is processed by I2C_LCD independent controller, saving user controller resources.
- Supports cursor function, can set up 16 cursor flicker frequency.
- Supports 128 level backlight lightness adjustment.
- Support 64 level screen contrast adjustment.
- Support device address modification.
- Supports 127 I2C_LCD work in parallel.
- When debugging code, it can take the place of the serial monitor to monitor the program running state.
- Two abnormal recovery methods are provided: reset and restore the factory settings.
- Compatible with Grove interface and 4Pin-100mil interface (under the Grove socket).
- 4 symmetrical fixed hole design for easy user installation.
- China style unique appearance.

Platforms Supported
Interface Function
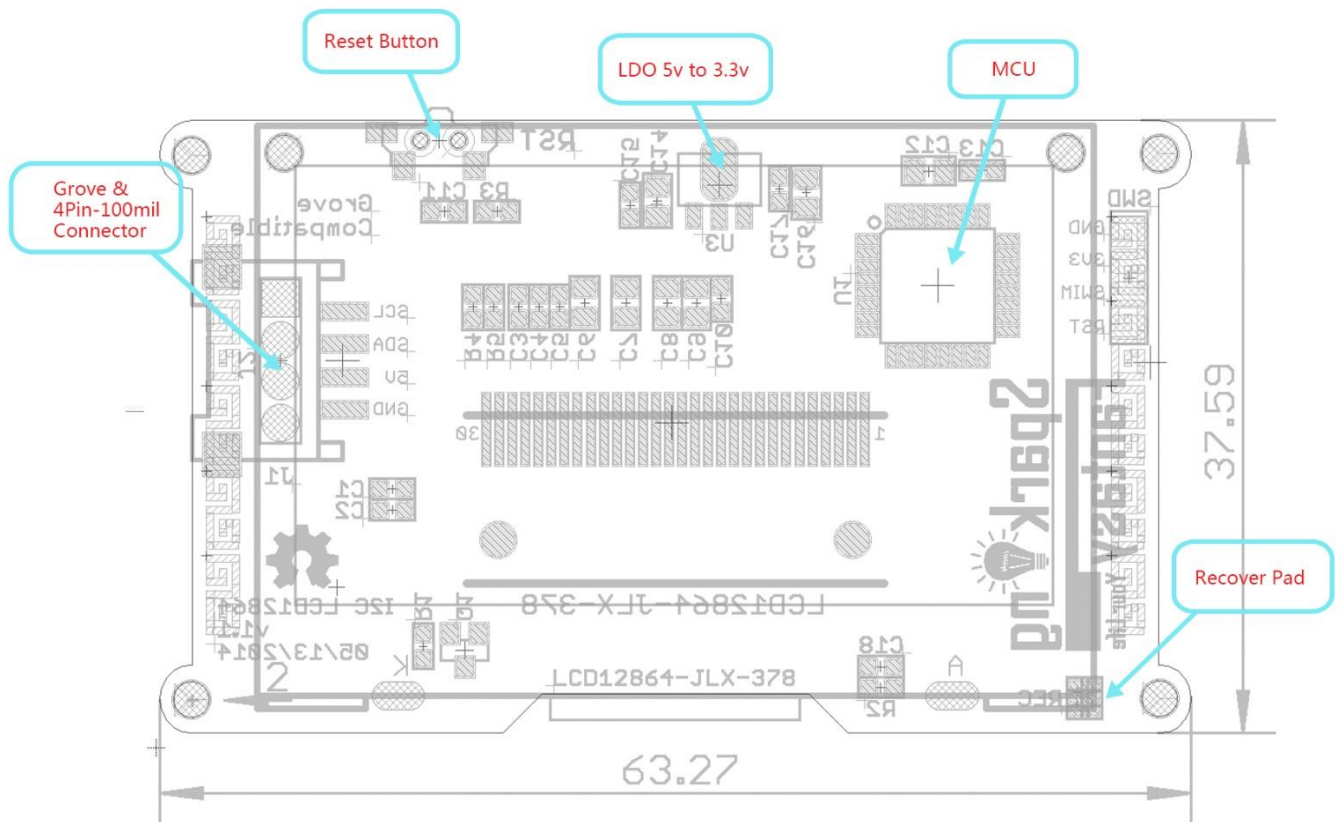
Specification

Parameter	Value
Screen Type	Dual colour LCD
Screen Resolution	128*64 Pixels
Screen Active Area (L*W)	47.1*26.5mm
Individual Pixel Size	0.33*0.33mm
Communication Mode	I2C(100Kbit/s and 400Kbit/s)
Controller	STM8S005KBT6
Operating Frequency	16 MHz
Weight	20g

Electrical Characteristics

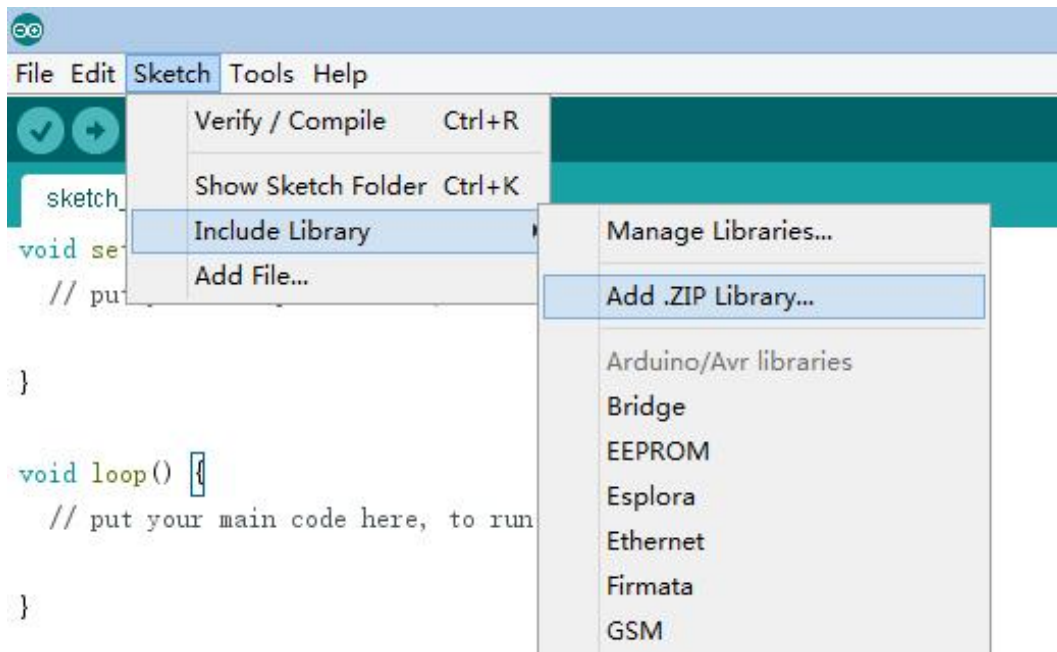| Parameter	Min.	Typical	MNax.	Unit
Supply voltage （5V to GND）	4.5	5	5.5	V
Logic Voltage （SCL/SDA）	2.8	5	5.5	V
HBM ESD	-	5000	-	V
Temperature	-20	25	70	℃

Getting Started

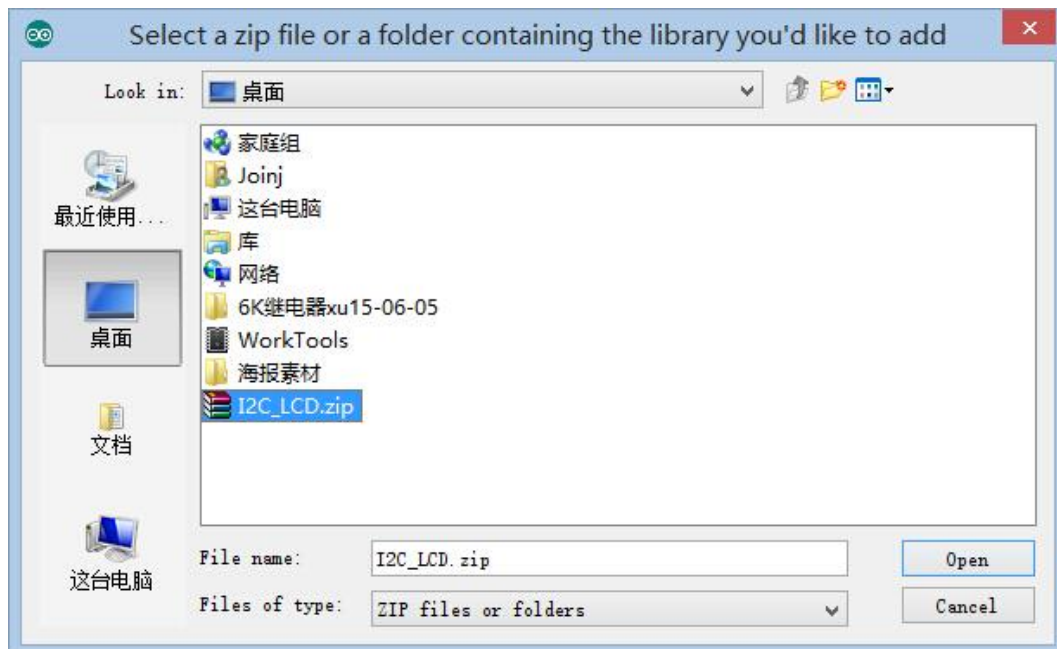**Step 1:** Install the latest version of Arduino IDE to your computer.

Download Arduino IDE

Step 2: Download and install the I2C_LCD library to Arduino IDE:

Open Arduino IDE, **click Sketch -> Include library -> Add .ZIP library**.
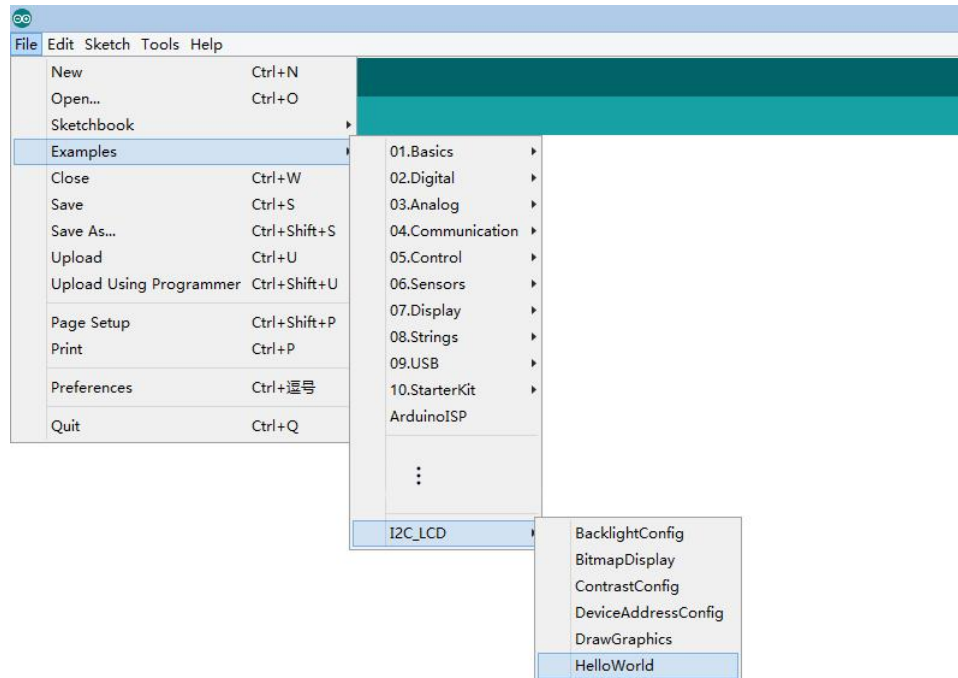

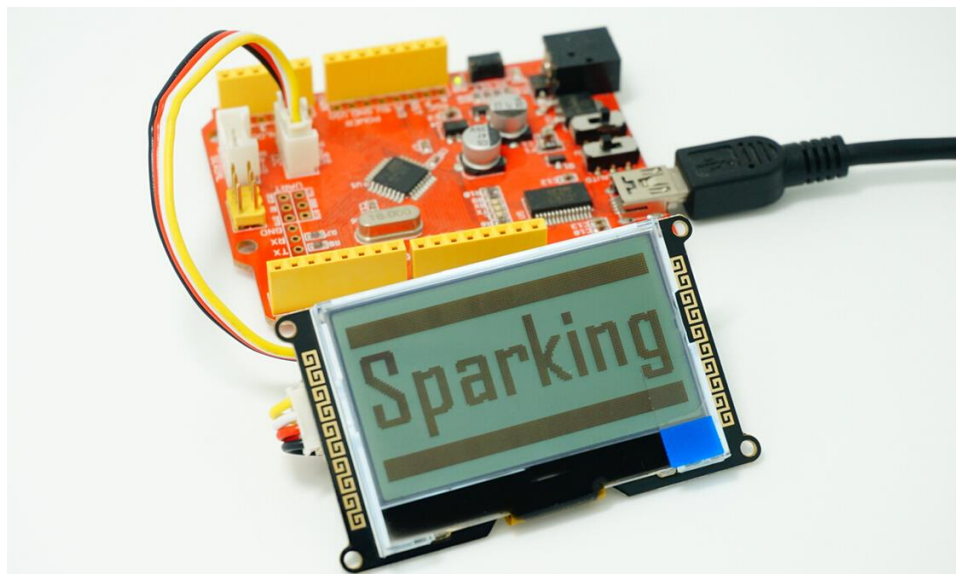Find and select the **I2C_LCD.zip** file you just downloaded.

Restart the Arduino IDE.

Step 3: Chose the example project which you like. (Take "HelloWorld" project for example here.)

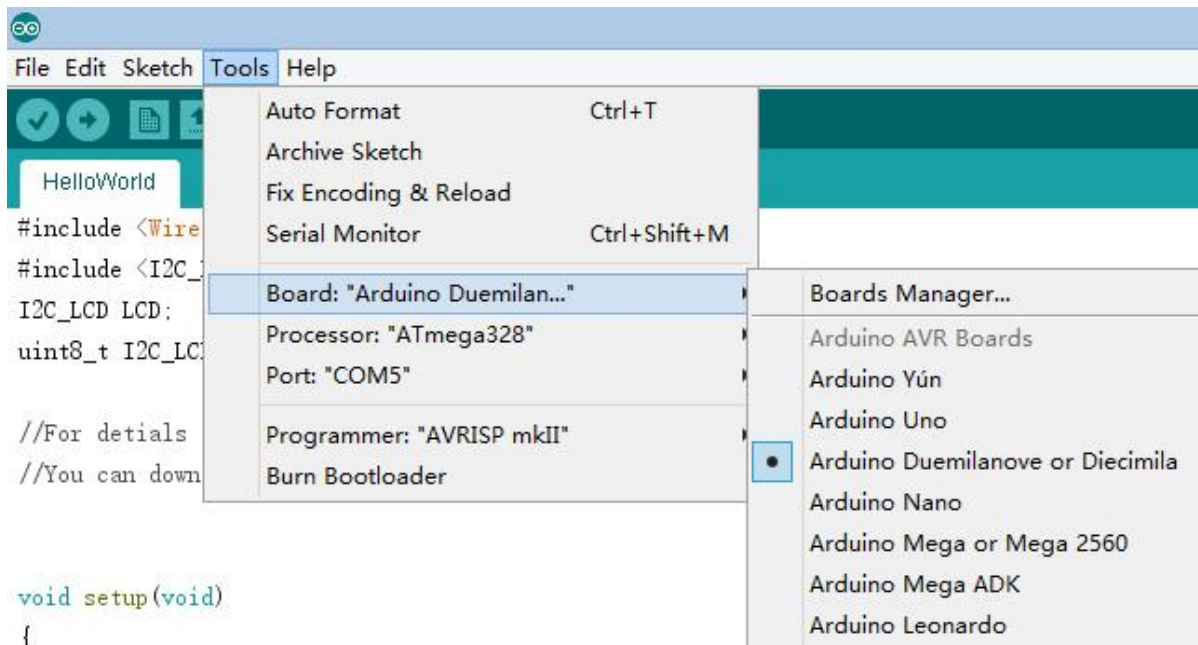**Click File > Examples > I2C_LCD > HelloWorld**

Step 4: Connect I2C_LCD to your Seeeduino Vx board with Grove cable. Then connect Seeeduino Vx board to your computer.
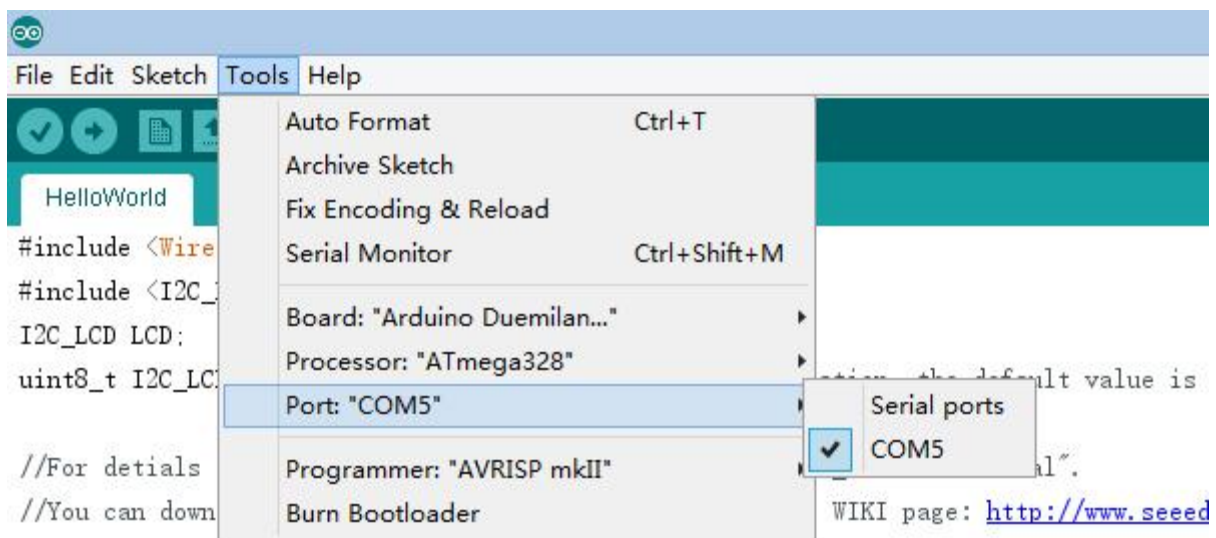
Step 5: Select your board and serial port.

Select the board: **Click Tools > Board > "Arduino Duemilanove or Diecimila"(Seeeduino V3.0 Or early version), "Arduino Uno"(Seeeduino Lotus or Seeeduino V4.0)**.

Select the COM: **Click Tools -> Serial Port -> COMX(which connected with your board.)**

Step 6: Upload the program and **enjoy yourself!**

PS:

1. For more details about library install please refer to https://arduino.cc/en/Guide/Liaries.
2. If you encounter other problems during the use, please refer to the User Manual for help. If you can't solve it, please contact us.

Technical support: Joney.s@foxmail.com

Version Tracker

I2C_LCD Hardware:

Revision	Release Note	Release Date
I2C_LCD_v1.2	1. Add production test point.	Sep 18, 2015
I2C_LCD_v1.1	1. Modify the logo position. 2. Modify the board shape. 3. Modify the button position.	May 8, 2014
I2C_LCD_v1.0	1. Modify the power circuit wiring.	Mar 1, 2014
I2C_LCD_v0.9b	1. Initial public release.	Feb 15, 2014

I2C_LCD Library:

Revision	Release Note	Release Date
I2C_LCD_v1.21	Support LinkIt boards.	Aug 21, 2016
I2C_LCD_v1.20	Reorganize I2C_LCD driver interface, make it easy to transplant to any other boards.	Apr 16, 2016
I2C_LCD_v1.12	Modify the bug that can't display bitmap when y coordinate is more than 16.	Sep 4, 2015
I2C_LCD_v1.11	Modify the bug that '\t' can't print.	Jun 27, 2015
I2C_LCD_v1.10	1.Add LCD print function. 2.Edit DeviceAddressConfig example.	Jun 25, 2015
I2C_LCD_v1.0	Initial public release.	July 6, 2014

Resources

Keeping update the latest version.

The repository of Arduino library hosted here, if you have any good idea of the code, you can pull to us.

- I2C_LCD Library
- I2C_LCD User Manual EN
- I2C_LCD User Manual 中文
- BitmapConverter(ForWindows)
- BitmapConverter(ForMacOS)
- BitmapConverter(ForLinux)
- I2C_LCD_SourceFile

Tech Support

Please submit any technical issue into our forum.

https://wiki.seeedstudio.com/I2C_LCD/