Datasheet
I2C 1602 Serial LCD Module

Product features:

The I2C 1602 LCD module is a 2 line by 16 character display interfaced to an I2C daughter board. The I2C interface only requires 2 data connections, +5 VDC and GND to operate.

For in depth information on I2C interface and history, visit: http://www.wikipedia/wiki/i2c

Specifications:

- I2C Address Range: 0x20 to 0x27 (Default=0x27, addressable)
- Operating Voltage: 5 Vdc
- Backlight: White
- Contrast: Adjustable by potentiometer on I2C interface
- Size: 80mm x 36mm x 20 mm
- Viewable area: 66mm x 16mm

Power:
The device is powered by a single 5Vdc connection.
Pinout Diagram:

Pin/Control Descriptions:

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GND</td>
<td>Power</td>
<td>Supply &amp; Logic ground</td>
</tr>
<tr>
<td>2</td>
<td>VCC</td>
<td>Power</td>
<td>Digital I/O 0 or RX (serial receive)</td>
</tr>
<tr>
<td>3</td>
<td>SDA</td>
<td>I/O</td>
<td>Serial Data line</td>
</tr>
<tr>
<td>4</td>
<td>SCL</td>
<td>CLK</td>
<td>Serial Clock line</td>
</tr>
<tr>
<td>A0</td>
<td>A0</td>
<td>Jumper</td>
<td>Optional address selection A0 - see below</td>
</tr>
<tr>
<td>A1</td>
<td>A1</td>
<td>Jumper</td>
<td>Optional address selection A1 - see below</td>
</tr>
<tr>
<td>A2</td>
<td>A2</td>
<td>Jumper</td>
<td>Optional address selection A2 - see below</td>
</tr>
<tr>
<td>Backlight</td>
<td>Jumper</td>
<td></td>
<td>Jumpered - enable backlight, Open - disable backlight</td>
</tr>
<tr>
<td>Contrast</td>
<td>Pot</td>
<td></td>
<td>Adjust for best viewing</td>
</tr>
</tbody>
</table>

Addressing:

<table>
<thead>
<tr>
<th>A0</th>
<th>A1</th>
<th>A2</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>Open</td>
<td>Open</td>
<td>0x27</td>
</tr>
<tr>
<td>Jumper</td>
<td>Open</td>
<td>Open</td>
<td>0x26</td>
</tr>
<tr>
<td>Open</td>
<td>Jumper</td>
<td>Open</td>
<td>0x25</td>
</tr>
<tr>
<td>Jumper</td>
<td>Jumper</td>
<td>Open</td>
<td>0x24</td>
</tr>
<tr>
<td>Open</td>
<td>Open</td>
<td>Jumper</td>
<td>0x23</td>
</tr>
<tr>
<td>Jumper</td>
<td>Open</td>
<td>Jumper</td>
<td>0x22</td>
</tr>
<tr>
<td>Open</td>
<td>Jumper</td>
<td>Jumper</td>
<td>0x21</td>
</tr>
<tr>
<td>Jumper</td>
<td>Jumper</td>
<td>Jumper</td>
<td>0x20</td>
</tr>
</tbody>
</table>
Software:

Download the required LCD Arduino™ library for this device from:


Replace current liquid crystal library found in the Arduino library directory with the above
(Note: If you use the examples included with the library, be sure to change address to 0x27)

Simple example using library above.

```c
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
#if defined(ARDUINO) && ARDUINO >= 100
#define printByte(args) write(args);
#else
#define printByte(args) print(args, BYTE);
#endif

LiquidCrystal_I2C lcd(0x27, 16, 2); // set the LCD address to 0x27 for a
//chars and 2 line display
void setup()
{
    lcd.init(); // initialize the lcd
    lcd.backlight();
    lcd.clear();
    delay(100);
    for(int i = 0; i < 3; i++)
    {
        lcd.backlight();
        delay(250);
        lcd.noBacklight();
        delay(250);
    }
    lcd.backlight();
}

void loop()
{
    int x=0;
    lcd.clear();
    lcd.setCursor(2,0); //Start at character 0 on line 0
    lcd.print("Hello World");
    lcd.setCursor(0,1); //Start at character 0 on line 1
    lcd.print("opencircuit.nl");
    delay(3000); //Wait 3 seconds
    lcd.Clear();
    lcd.setCursor(0,0); //Start at character 0 on line 0
    lcd.print("Cursor Blink");
    lcd.blink();
    delay(2000);
    lcd.setCursor(0,0);
    lcd.print("Cursor noBlink");
    lcd.noBlink();
    delay(2000);
}