Grove - OLED Display 0.96"

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Wiki: http://www.seeedstudio.com/wiki/Grove_-_OLED_Display_96*96

Bazaar: http://www.seeedstudio.com/depot/Grove-OLED-Display-096-p-824.html

Document Revision History

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

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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

It is a 16 color grayscale 128×64 dot matrix OLED display module with Grove compatible 4pin I2C interface. Grove - OLED 128 x 64 is constructed with 128 x 64 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.

- Communicate Mode: I2C
- Grayscale Display: 16 Gray shades.
- Supports both Normal and Inverse Color Display.
- Supports Continuous Horizontal Scrolling.
- Grove compatible Interface

Please notice: heavy impact or stress on the OLED will cause the breakdown of screen.

2. Specifications

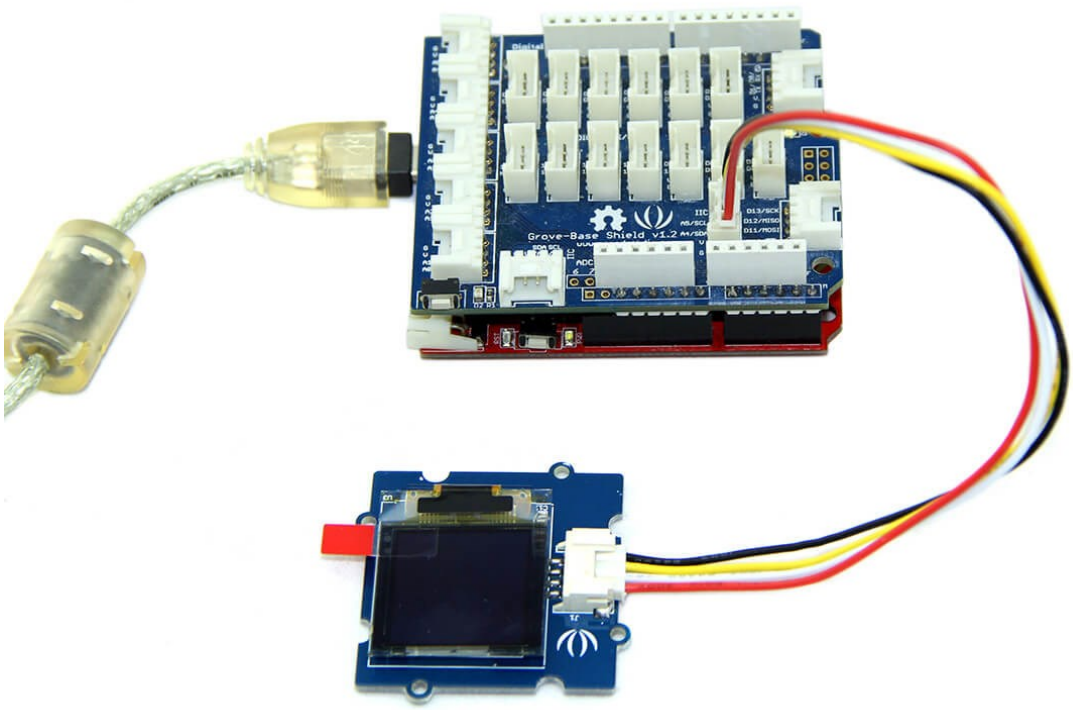
Operating Voltage	3.3~5V
Dot Matrix	128 x 64
Display Color	16 Grayscale
OLED Display	LY120-96096
Driver IC	SSD1327Z
Dot Size	0.15(W)mm X 0.15 (H)mm
Dot Pitch	0.17(W)mm X 0.175 (H)mm
Operating Temperature	-40℃~70℃

3. Demonstrations

3.1 With Arduino

NOTE:

- Grove OLED 128 x 64 module is very compact and fragile. Handle the display with care.
- Do not stress or drop the display to ground.
- Do not scratch the surface.
- Ensure the correct polarity for 4pin connection



Download the LCD_Display Library and Unzip it into the libraries file of Arduino IDE by the path: ..\arduino-1.0.1\libraries, then you can play with your own display system.

3.1.1 Demo 1: Display 'Hello World' In Normal Mode

```
#include <Wire.h>
#include <SeeedGrayOLED.h>
#include <avr/pgmspace.h>


void setup()
{
```

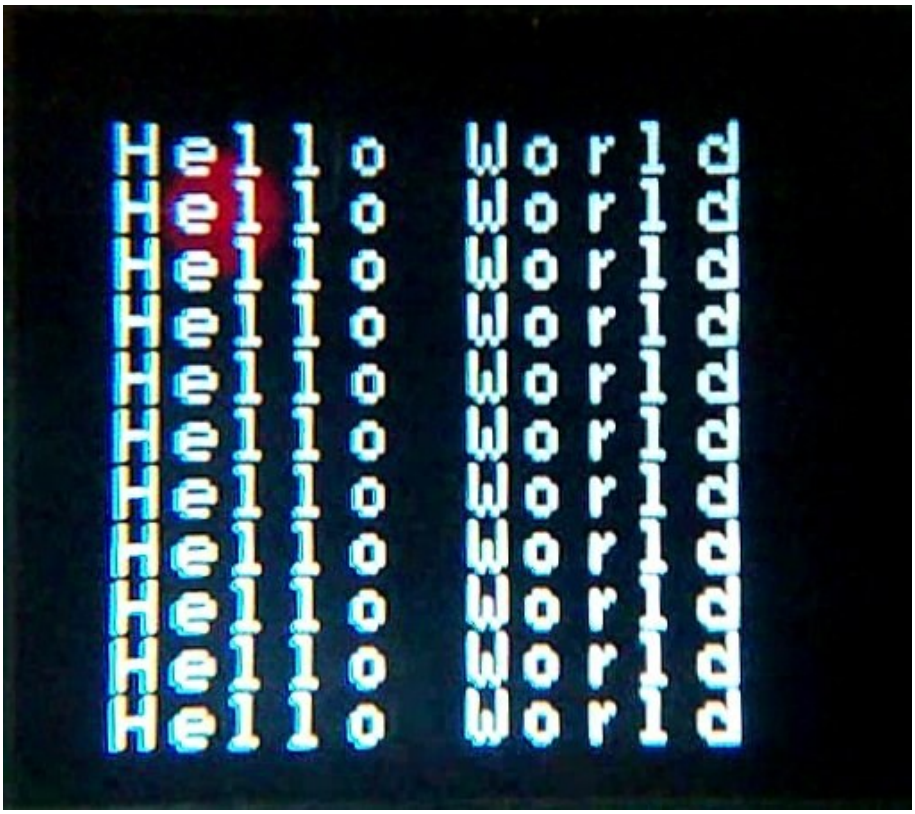
```
    Wire.begin();
    SeeedGrayOled.init();                    //initialize SEEED OLED display
    SeeedGrayOled.clearDisplay();          //Clear Display.
    SeeedGrayOled.setNormalDisplay(); //Set Normal Display Mode
    SeeedGrayOled.setVerticalMode();    // Set to vertical mode for displaying text

    for(char i=0; i < 12 ; i++)
    {
        SeeedGrayOled.setTextXY(i,0);    //set Cursor to ith line, 0th column
        SeeedGrayOled.setGrayLevel(i); //Set Grayscale level. Any number between 0 - 15.
        SeeedGrayOled.putString("Hello World"); //Print Hello World
    }
}

void loop()
{

}
```

Output



Hello World on Normal Display

3.1.2 Demo 2: Display Hello World in Inverse Mode

```
#include <Wire.h>
#include <SeeedGrayOLED.h>
#include <avr/pgmspace.h>


void setup()
{
    Wire.begin();
    Serial.begin(9600);
    SeeedGrayOled.init();                    // initialize SEEED OLED display
    SeeedGrayOled.setInverseDisplay();      // Set display to inverse mode
    SeeedGrayOled.clearDisplay();            // Clear Display.
    SeeedGrayOled.setVerticalMode();         // Set to vertical mode for displaying text

    for(char i=0; i < 12 ; i++)
    {
        SeeedGrayOled.setTextXY(i,0);    //set Cursor to ith line, 0th column
        SeeedGrayOled.setGrayLevel(i); //Set Grayscale level. Any number between 0 - 15.
        SeeedGrayOled.putString("Hello World"); //Print Hello World
    }
}

void loop()
{

}
```

Output

Hello World on Normal Display

3.1.3 Demo 3: Print Numbers

```
#include <Wire.h>
#include <SeeedGrayOLED.h>


void setup()
{
    Wire.begin();
    SeeedGrayOled.init();   //initialize SEEED Gray OLED display

    SeeedGrayOled.clearDisplay();           //clear the screen and set start position to top left corner
    SeeedGrayOled.setNormalDisplay();       //Set display to Normal mode
    SeeedGrayOled.setVerticalMode();        // Set to vertical mode for displaying text

    SeeedGrayOled.setTextXY(0,0);           //Set the cursor to 0th line, 0th Column
    SeeedGrayOled.putNumber(123);           //Print number
    SeeedGrayOled.setTextXY(1,0);           //Set the cursor to 1st line, 0th Column
    SeeedGrayOled.putNumber(0xFFFF);        //Print number
```

```
    SeeedGrayOled.setTextXY(2,0);              //Set the cursor to 2nd line, 0th Column
    SeeedGrayOled.putNumber(0xFFFFFFFF);       //Print number
    SeeedGrayOled.setTextXY(3,0);              //Set the cursor to 3rd line, 0th Column
    SeeedGrayOled.putNumber(-12345);           //Print number


}

void loop()
{

}
```

Output

Hello World on Normal Display

3.1.4 Demo 4: Draw Binary Bitmap

```
#include <Wire.h>
#include <SeeedGrayOLED.h>
#include <avr/pgmspace.h>

static unsigned char SeeedLogo[] PROGMEM =
{

    0x00, 0x00, 0x00, 0x00, 0x00, 0x20, 0x08, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x60, 0x04, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xC0, 0x06, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x01, 0xC0, 0x07, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x01, 0xC0, 0x07, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x03, 0x80, 0x03, 0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x03, 0x80, 0x03, 0x80,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x07, 0x80, 0x03, 0xC0, 0x00, 0x00, 0x00, 0x00,
```

```
0x00, 0x00, 0x00, 0x00, 0x07, 0x80, 0x01, 0xC0, 0x08, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x20,
0x07, 0x80, 0x01, 0xE0, 0x08, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x20, 0x0F, 0x80, 0x01, 0xE0,
0x08, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x30, 0x0F, 0x00, 0x01, 0xE0, 0x08, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x30, 0x0F, 0x00, 0x01, 0xE0, 0x18, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x30,
0x0F, 0x00, 0x01, 0xE0, 0x18, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x30, 0x0F, 0x00, 0x01, 0xE0,
0x18, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x38, 0x0F, 0x00, 0x01, 0xE0, 0x18, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x38, 0x0F, 0x00, 0x01, 0xE0, 0x38, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x38,
0x0F, 0x80, 0x01, 0xE0, 0x38, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x3C, 0x0F, 0x80, 0x01, 0xE0,
0x78, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x3E, 0x0F, 0x80, 0x03, 0xE0, 0x78, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x1E, 0x07, 0x80, 0x03, 0xE0, 0xF8, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x1E,
0x07, 0x80, 0x03, 0xE0, 0xF0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x1F, 0x07, 0x80, 0x03, 0xC1,
0xF0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x0F, 0x87, 0xC0, 0x07, 0xC1, 0xF0, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x0F, 0x83, 0xC0, 0x07, 0x83, 0xE0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x0F,
0xC3, 0xC0, 0x07, 0x87, 0xE0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x07, 0xE1, 0xE0, 0x07, 0x0F,
0xC0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x03, 0xF0, 0xE0, 0x0F, 0x0F, 0x80, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x01, 0xF8, 0xF0, 0x0E, 0x1F, 0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x01,
0xF8, 0x70, 0x1C, 0x3F, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xFC, 0x30, 0x18, 0x7E,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x7F, 0x18, 0x30, 0xFC, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x1F, 0x88, 0x21, 0xF0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x0F, 0xC4, 0x47, 0xE0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x03, 0xE0, 0x0F, 0x80,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xF8, 0x3E, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x0E, 0xE0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x02, 0x00, 0x00, 0x00, 0x00, 0x6C, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x02, 0x00, 0x06, 0x00, 0x00, 0x6C, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x02, 0x00, 0x06,
0x00, 0x00, 0x60, 0x00, 0x7E, 0x3F, 0x0F, 0xC3, 0xF0, 0xFA, 0x0F, 0xDF, 0xE1, 0x9F, 0xEC, 0x7E,
0xE6, 0x73, 0x9C, 0xE7, 0x39, 0xCE, 0x1C, 0xDF, 0xE1, 0xB9, 0xEC, 0xE7, 0xE0, 0x61, 0xD8, 0x66,
0x1B, 0x86, 0x1C, 0x06, 0x61, 0xB0, 0x6D, 0xC3, 0x7C, 0x7F, 0xFF, 0xFF, 0xFF, 0x06, 0x0F, 0x86,
0x61, 0xB0, 0x6D, 0x83, 0x3E, 0x7F, 0xFF, 0xFF, 0xFF, 0x06, 0x07, 0xC6, 0x61, 0xB0, 0x6D, 0x83,
0xC3, 0x61, 0x18, 0x46, 0x03, 0x86, 0x18, 0x66, 0x61, 0xB0, 0x6D, 0xC3, 0xFE, 0x7F, 0x9F, 0xE7,
0xF9, 0xFE, 0x1F, 0xE6, 0x3F, 0x9F, 0xEC, 0xFE, 0x7E, 0x3F, 0x0F, 0xC3, 0xF0, 0xFA, 0x0F, 0xC6,
0x3F, 0x9F, 0xEC, 0x7E, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
```

```
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x7C, 0x00,
    0x00, 0x20, 0x82, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x44, 0x00, 0x00, 0x20, 0x82, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x6C, 0xF3, 0xCF, 0x70, 0x9E, 0x79, 0xE7, 0x80, 0x00, 0x00,
    0x00, 0x00, 0x7D, 0x9E, 0x68, 0x20, 0xB2, 0xC8, 0x64, 0x00, 0x00, 0x00, 0x00, 0x00, 0x47, 0x9E,
    0x6F, 0x20, 0xB2, 0xF9, 0xE7, 0x80, 0x00, 0x00, 0x00, 0x00, 0x46, 0x9A, 0x61, 0x20, 0xB2, 0xCB,
    0x60, 0x80, 0x00, 0x00, 0x00, 0x00, 0x7C, 0xF3, 0xCF, 0x30, 0x9E, 0x79, 0xE7, 0x90, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x10, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x7C, 0x02, 0x00, 0x00, 0x82, 0x60, 0x00, 0x00,
    0xF8, 0x00, 0x00, 0x40, 0x40, 0x02, 0x00, 0x00, 0x83, 0x60, 0x00, 0x00, 0x8C, 0x00, 0x00, 0x40,
    0x60, 0xB7, 0x79, 0xE7, 0x81, 0xC7, 0x92, 0x70, 0x89, 0xE7, 0x9E, 0x78, 0x7C, 0xE2, 0xC9, 0x2C,
    0x81, 0xCC, 0xD2, 0x40, 0xFB, 0x21, 0xB2, 0x48, 0x40, 0x62, 0xF9, 0x2C, 0x80, 0x8C, 0xD2, 0x40,
    0x8B, 0xE7, 0xB0, 0x48, 0x40, 0xE2, 0xC9, 0x2C, 0x80, 0x84, 0xD2, 0x40, 0x8B, 0x2D, 0x92, 0x48,
    0x7D, 0xB3, 0x79, 0x27, 0x80, 0x87, 0x9E, 0x40, 0x8D, 0xE7, 0x9E, 0x48, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
};

void setup()
{
    Wire.begin();
    SeeedGrayOled.init();                    // initialize SEEED OLED display

    SeeedGrayOled.clearDisplay();                    //    clear the screen and set start position to top
left corner
    //Draw binary Bitmap
    SeeedGrayOled.drawBitmap(SeeedLogo,96*96/8);    //    Draw binary Bitmap (96 pixels *96 pixels    /
8) bytes
}

void loop()
{

}
```

Output

Note: You can make a gray 96*96 image arbitrary that can be shown on OLED 96*96. The manufacturing procedure can reference it(include associated software).

4. Reference

- Seeed Gray OLED library provides complete software interfaces to exercise the capabilities of SSD1327Z driver with a 96x96 gray OLED. Almost all useful features are implemented and all functions are in public scope. This makes Seeed Gray OLED Library extensible. Seeed Gray OLED library uses Arduino Wire library. Hence initialize wire library before initializing Seeed OLED library.

Function Description:

1. init()

Initializes the Seeed OLED frame and sets the display to Normal mode.

Example：

```
SeeedGrayOled.init();    //initialze SEEED Gray OLED display
```

2. clearDisplay()

Clears the whole screen. Should be used before starting a fresh start or after scroll deactivation. This function also sets the cursor to top left corner.

Example：

```
SeeedGrayOled.clearDisplay();    //clear the screen and set start position to top left corner
```

3. setNormalDisplay()

Configures the display to normal mode(non-inverse) mode.

```
SeeedGrayOled.setNormalDisplay();//Set display to normal mode (i.e non-inverse mode)
```

4. setContrastLevel(unsigned char ContrastLevel)

Set the contrast ratio of OLED display. ContrastLevel can be any number from 0 - 255.

Example：

```
SeeedGrayOled.setContrastLevel(127); //Set display contrast ratio to half level( i.e 256/2 - 1 ).
```

5. setInverseDisplay())

Configures the display to inverse mode.

Example：

```
SeeedGrayOled.setInverseDisplay();          //Set display to inverse mode
```

6. setHorizontalMode()

Configures the display to horizontal addressing mode.

Example：

```
SeeedGrayOled.setHorizontalMode();          //Set addressing mode to Horizontal Mode
```

7. setVerticalMode()

Configures the display to vertical addressing mode. Texts are drawn in vertical mode. Please set the display to vertical mode before printing text.

Example：

```
SeeedGrayOled.setVerticalMode();          //Set addressing mode to Vertical Mode
```

8. setTextXY(X,Y)

Set the text's position (cursor) to Xth Text Row, Yth Text Column.96x96 OLED is divided into 12 rows and 12 Columns of text. This row and column should not be confused with OLED Row and Column.

- X can be any number from 0 - 11.
- Y can be any number from 0 - 11.

Example：

```
SeeedGrayOled.setTextXY(0,0);    //Set the cursor to 0th Text Row, 0th Text Column
```

9. putChar(unsigned char c)

Print a character to OLED display starting from current address-pointer set by setTextXY(X,Y). This function is internally used by putString().

Example：

```
SeeedGrayOled.putChar('S'); //Print the character S
```

10. putString(cont char *string)

Print string to OLED display starting from current address-pointer set by setTextXY(X,Y)

Example：

```
SeeedGrayOled.putString("Hello World!"); //Print the String
```

11. putNumber(long n)

Print numbers to OLED display starting from current address-pointer set by setTextXY(X,Y). Number can be any char,int or long datatype. It also takes care of -ve sign.

Example：

```
SeeedGrayOled.putNumber(-56123); //Print number -56123
```

12. drawBitmap(unsigned char *bitmaparray,int bytes)

Display a binary bitmap on the OLED matrix. The data is provided through a pointer to

unidimensional array holding bitmap. The bitmap data is available in continuous rows of columns as like Horizontal Addressing mode.

bytes is size of bitmap in bytes.

Example：

```
SeeedGrayOled.drawBitmap(SeeedLogo,96*96/8);    //    Draw binary Bitmap (96 pixels *96 pixels    / 8) bytes
```

13. setHorizontalScrollProperties(bool direction,unsigned char startRow, unsigned char endRow,unsigned char startColumn, unsigned char endColumn, unsigned char scrollSpeed)

Set the properties of horizontal scroll.

- Direction can be any of Scroll_Left and Scroll_Right.
- startRow can be 0 - 127
- endRow can be 0 - 127. It should be greater than startRow
- startColumn can be 0 - 63
- endColumn can be 0 - 63. It should be greater than startRow
- scrollSpeed can be any of defines:Scroll_2Frames,Scroll_3Frames,Scroll_4Frames,Scroll_5Frames,Scroll_25Frames,Scroll_64Frames,Scroll_128Frames,Scroll_256Frames.

Example：

```
SeeedGrayOled.setHorizontalScrollProperties(Scroll_Left,72,95,0,47,Scroll_5Frames); //Set the properties of Horizontal Scroll
```

14. activateScroll()

Enable scrolling. This should be used only after setting horizontal scroll properties.

Example：

```
SeeedGrayOled.activateScroll();    //Enable scrolling.
```

15. deactivateScroll()

Disable scrolling. This should be used after activateScroll();

Example：

```
SeeedGrayOled.activateScroll();    //Disable scrolling.
```

5. With Raspberry Pi

1. You should have got a raspberry pi and a grovepi or grovepi+.
2. You should have completed configuring the development environment, otherwise follow here.
3. Connection. Plug the sensor to grovepi socket i2c-x(1~3) by using a grove cable.
4. Navigate to the demos' directory:

```
cd yourpath/GrovePi/Software/Python/grove_oled
```

To see the code

```
nano grove_i2c_oled_96x96_hello_world.py      # "Ctrl+x" to exit #
```

```
import grove_oled
import time

grove_oled.oled_init()
grove_oled.oled_clearDisplay()
grove_oled.oled_setNormalDisplay()
grove_oled.oled_setVerticalMode()
time.sleep(.1)

for i in range(0,12):
    grove_oled.oled_setTextXY(i,0)
    grove_oled.oled_putString("Hello World")
```

5. Run the demo.

```
sudo python grove_i2c_oled_96x96_hello_world.py
```

6. Resources

LCD_Display Library

github repository for OLED Display 96*96

Grove OLED 96x96 Schematic PDF

SSD1327 Datasheet

LY120 Datasheet

Reference for Make a 96*96 Image

File:Grove - 96x96 OLED Display v2.1 eagle.zip

Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.

Как с нами связаться

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