

Grove OLED Display (I2C) Guide

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Note: This guide is an update to [Grove OLED guide](#) by Team Wifi on the course website in the How To Guide section (under: **Fall 2016 Student How-To Guides (for BeagleBone Black)**). The library that is linked in the guide is outdated. We have found the [correct library](#). This guide will also demonstrate how you should modify the library in order to use the OLED display as well as how you can scroll the text on the OLED display.

Modifications to the library:

Please Follow Team Wifi's section (C Programming)

You will need to copy both `SeedGrayOLED.h` and `SeedGrayOLED.c` for the library and convert them to `.c` files (making the C++ class into a C module).

Using these Variables is recommended.

```
// Module Variables

static int i2cFileDesc;
static unsigned char grayH;
static unsigned char grayL;
static int Drive_IC;
```

i2cFileDesc is set by Team Wifi's `initI2cBus` function.

When you see a `delay(ms)` function (Which is a part of the Arduino library) replace it with any sleep function you know.

When Initializing the module use the `SSD1327` macro.

Scrolling OLED Screen Example

```
// The following will display the string "hello world" 12 times,  
// Scroll lines 5 and 6  
int main() {  
    i2c_fd = initI2cBus(I2C_BUS_2, I2C_ADDRESS);  
    init(SSD1327);  
    clearDisplay();  
    setVerticalMode();  
    for (int i = 0; i < 12; i++) {  
        setTextXY(i,0);  
        setGrayLevel(i);  
        putString("hello world");  
    }  
    // set area and direction for scrolling  
    // HorizontalScrollProperties Parameters  
    // ( direction, startRow, endRow, startColumn, endColumn, scrollSpeed )  
  
    setHorizontalScrollProperties(Scroll_Left, 40, 57, 0, 47, Scroll_2Frames);  
    activateScroll();  
}
```

Note: when using scrolling, when you want to clear the screen you **must** deactivateScroll() **then** clearDisplay(). This will stop any pixels being missed by clearDisplay().

References

Team Wifi's Guide:

<https://opencoursehub.cs.sfu.ca/bfraser/grav-cms/cmpt433/links/files/2016-student-howtos/GroveOLEDviaI2C.pdf>

Library by Seeed-Studio:

https://github.com/Seeed-Studio/OLED_Display_96X96