Application Note

WICED™ Display

WICED™ Display U8G Development

5300 California Avenue • Irvine, California, 92677 • Phone: 949-926-5000 • Fax: 949-926-5203

WICED-FLAC-R
August 01, 2015

Revision History

Revision	*Date*	*Change Description*
WICED-DISPLAY-R 1.0	August 07, 2015	Initial Revision
WICED-DISPLAY-R 1.1	September, 18 2015	Updated examples and pictures, additional info provided for reference

Broadcom Corporation
5300 California Avenue
Irvine, CA 92617

Table of Contents

1 About this Document

1.1 Purpose and Scope

This document provides instructions to integrate 128X64 OLED LCD Display U8G to WICED. Many displays are supported by u8glib, however this small low cost display is the most suitable for a wide variety of applications. The display may be found online and at other vendors, the E-Bay link below may also have similar products and varying pricing:

http://www.ebay.com/itm/White-0-96-I2C-IIC-Serial-128X64-OLED-LCD-LED-Display-Module-for-Arduino/171430553302

You may find other links and vendors with equivalent (and possibly lower-priced) products.

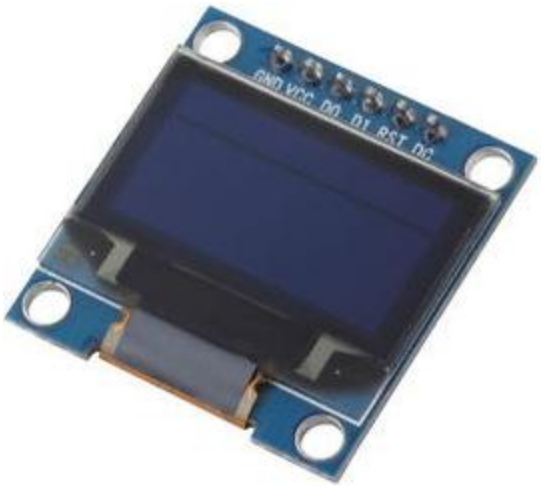
Note: This document applies to **WICED SDK 3.3.2** or higher.

1.2 Audience

This document is for software developers who are using the WICED Development System to create applications for secure embedded wireless networked devices and would like to enable embedded UI's with their application.

2 Blue 0.96"SPI/I2C Serial 128x64 OLED LCD LED Display Module

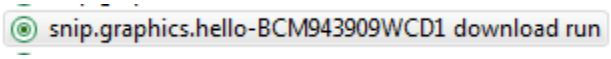
This application snippet demonstrates how to use the WICED I2C interface to the OLED LCD LED Display to WICED and Displays "Hello World!" on an attached display



2.1 Hello Application Instructions

- See the file WICED-SDK\apps\snip\graphics\hello\hello.c for release specific details.
- Modify the wiced_i2c_device_t struct below for your specific device. Modify arg 2 of u8g_InitComFn() in application_start() to reflect the type of display being used. The u8g library supports many different types of displays; you can look through the various u8g_dev_* files for I2C constructors.

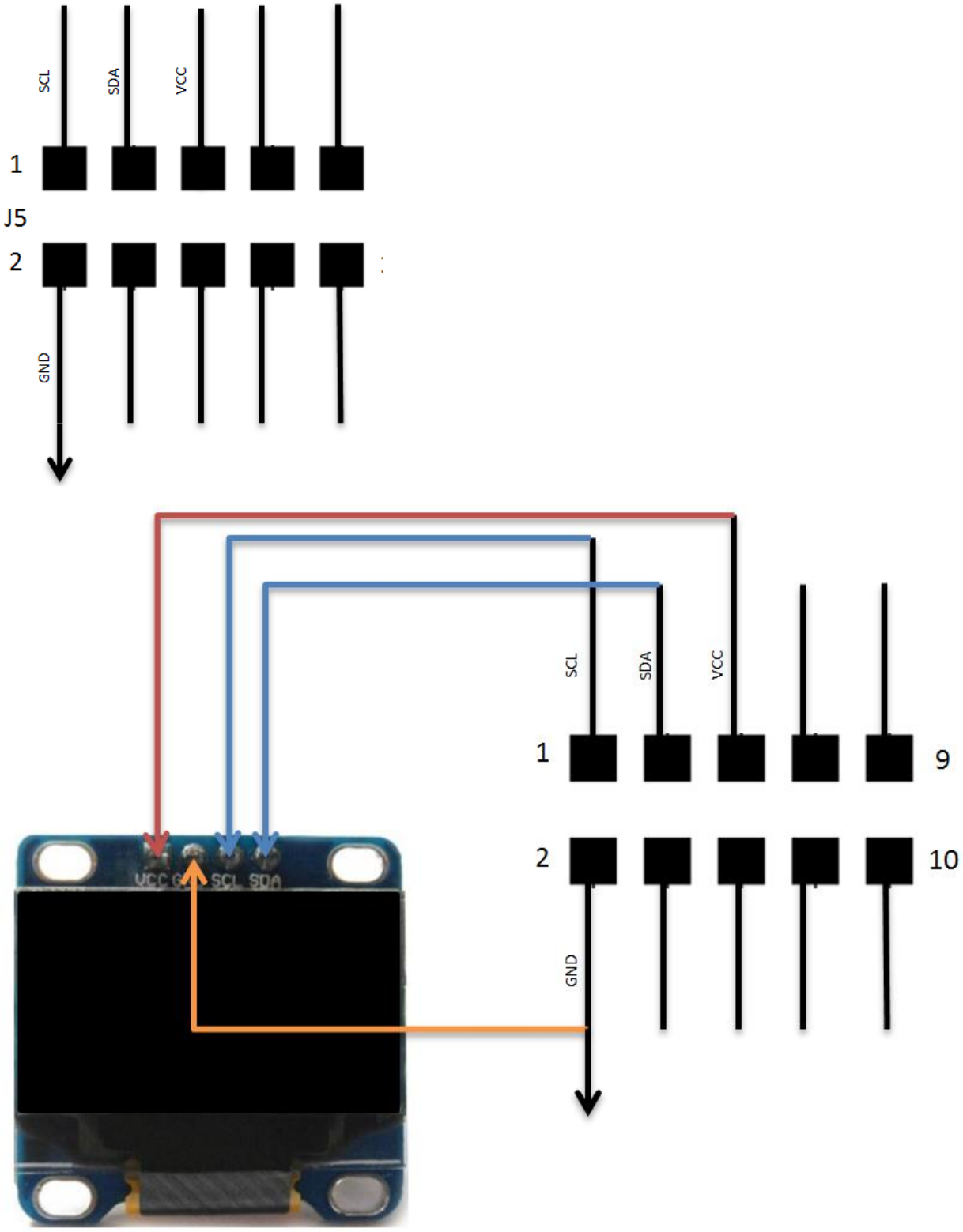
- Attach, build, download, and run graphics hello example application as described below



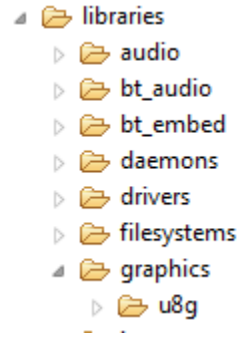
- Connect a PC terminal to the serial port of the WICED Eval board, then build and download the application as described in the WICED Quick Start Guide.

2.2 Hardware Instructions:

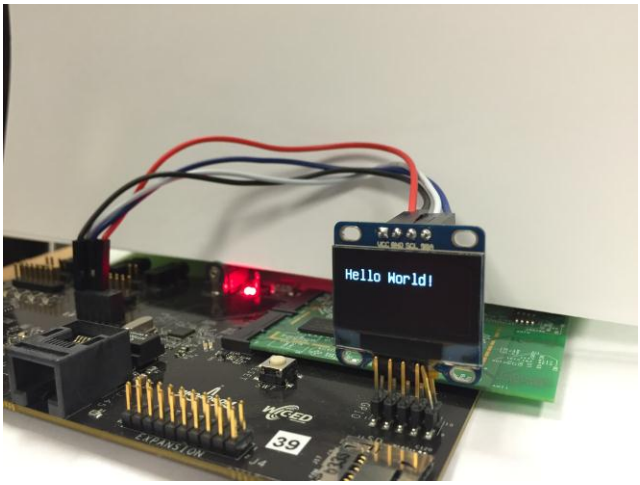
Connect the hardware as show in the diagram to the WICED hardware


SCL
SDA
VCC
1
J5
2
GND
SCL
SDA
VCC
1
9
2
10
GND
VCC
SCL
SDA

The u8g library for graphics can be found under libraries→graphics where the display driver can be found.



Once the hardware is properly configured, and you have built the hello world application, you should see the below on your display:

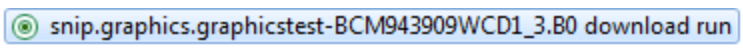


2.3 Graphics Test application

This advanced application shows all of the graphics capabilities of the u8g graphics library, similar to the hello test application; it demonstrates all of the features of the library. Follow these steps below to try out the demo:

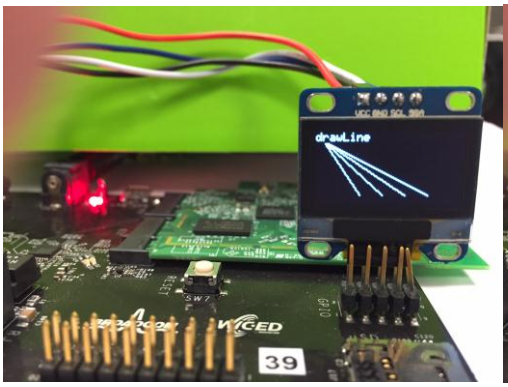
- See the file WICED-SDK\apps\snip\graphics\graphicstest\graphicstest.c for release specific details.
- Modify the wiced_i2c_device_t struct below for your specific device. Modify arg 2 of u8g_InitComFn() in application_start() to reflect the type of display being used. The u8g library supports many different types of displays; you can look through the various u8g_dev_* files for I2C constructors.

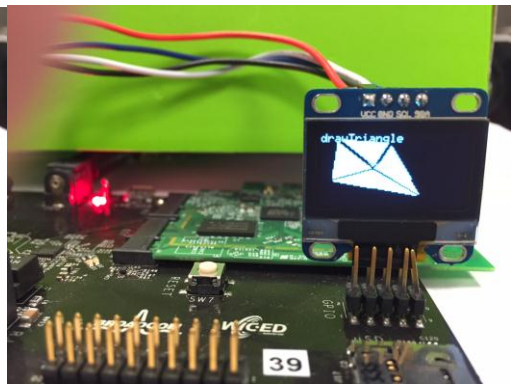
- Attach, build, download, and run graphics test example application as described below

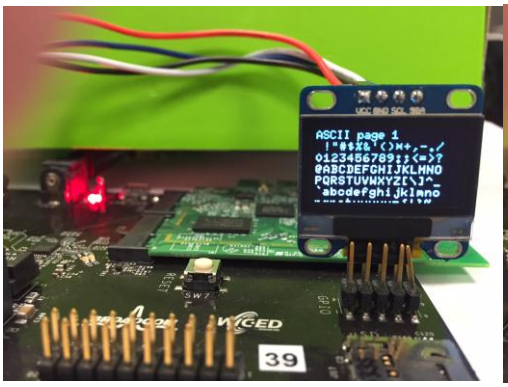


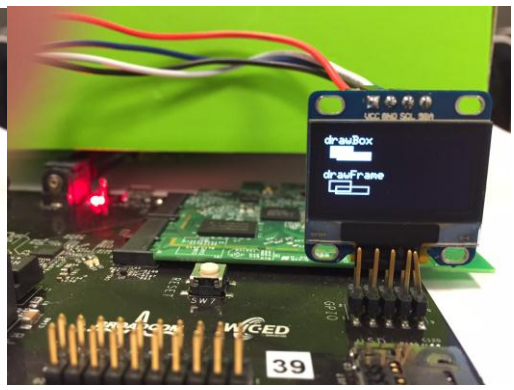
- Connect a PC terminal to the serial port of the WICED Eval board, then build and download the application as described in the WICED Quick Start Guide.

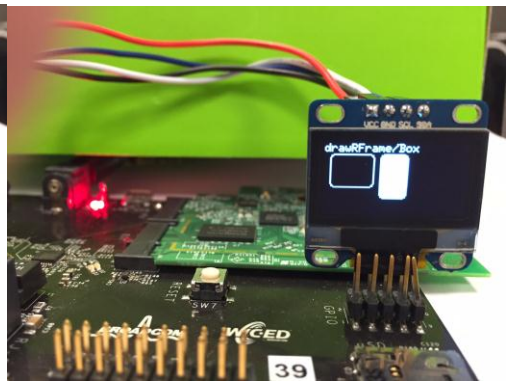
Once operational, you should see the below visual sequences on your display:











2.4 Additional Information

Many additional I2C displays are capable of being supported by this library, see the links below for additional reference information:

- https://code.google.com/p/u8glib/
- https://learn.adafruit.com/monochrome-oled-breakouts

BROADCOM CORPORATION
5300 California Avenue
Irvine, California, 92677

Phone : +1-949-926-5000
Fax: +1-949-926-5203
E-mail: info@broadcom.com
Web: www.broadcom.com

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