WICED Studio

WICED Display U8G Development

Doc. No.: 002-21469 Rev. **

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Contents

About This Document

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

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.

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.

Acronyms and Abbreviations

In most cases, acronyms and abbreviations are defined on first use.

For a comprehensive list of acronyms and other terms used in Cypress documents, go to www.cypress.com/glossary.

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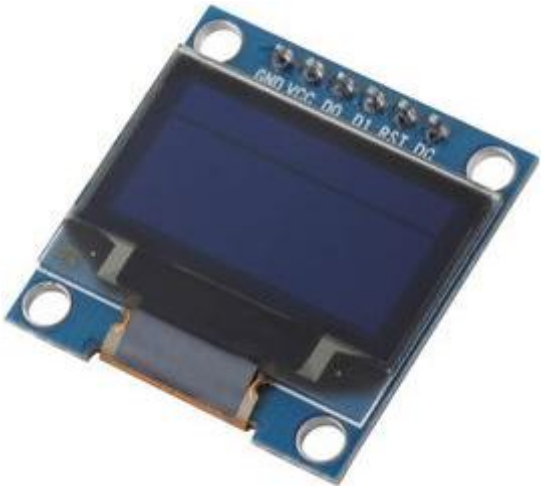
Cypress provides a wealth of data at www.cypress.com/internet-things-iot to help you to select the right IoT device for your design, and quickly and effectively integrate the device into your design. Cypress provides customer access to a wide range of information, including technical documentation, schematic diagrams, product bill of materials, PCB layout information, and software updates. Customers can acquire technical documentation and software from the Cypress Support Community website (community.cypress.com/).

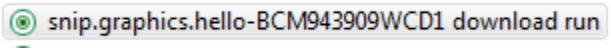
1 Blue 0.96"SPI/I2C Serial 128x64 OLED LCD LED Display Module

This application snippet demonstrates how to use the WICED I^2C interface to the OLED LCD LED Display to WICED and Displays "Hello World!" on an attached display



1.1 Hello Application Instructions

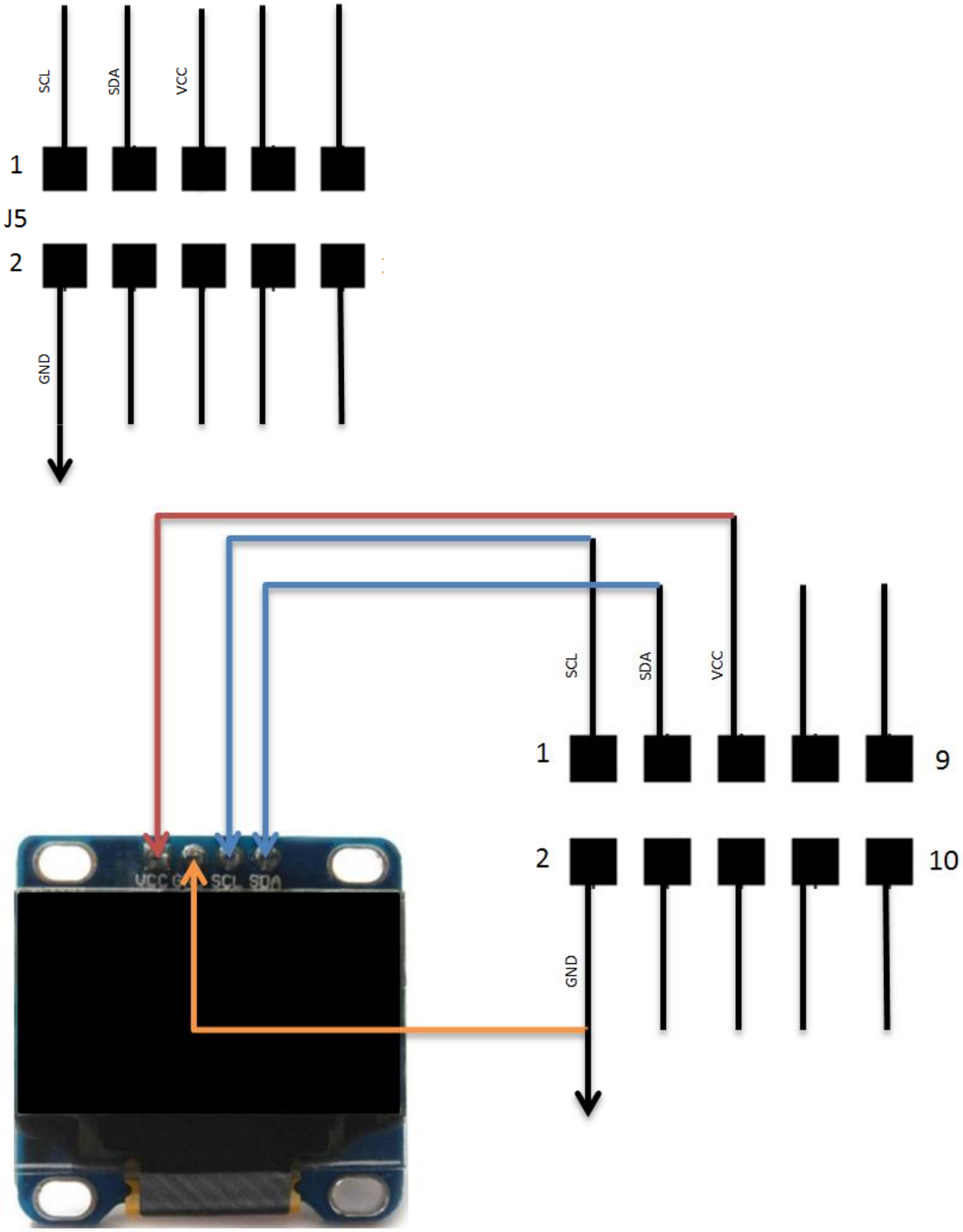
- See the *WICED-SDK\apps\snip\graphics\hello\hello.c* file for release specific details.
- Modify the `wiced_i2c_device_t struct` below for your specific device. Modify arg 2 of `u8g_InitComFn()` in `application_start()` to reflect the type of display being used. The u8g library supports many types of displays; you can look through the various u8g_dev_* files for I^2C constructors.
- Attach, build, download, and run graphics hello example application as described below:



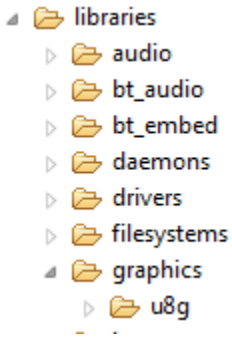
- Connect a PC terminal to the serial port of the WICED Eval board, then build and download the application as described in the WICED Quick Start Guide.

1.2 Hardware Instructions

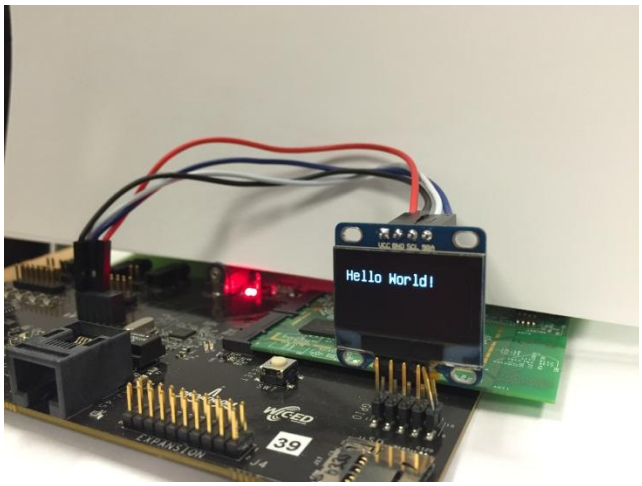
Connect the hardware as show in the diagram to the WICED hardware.



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



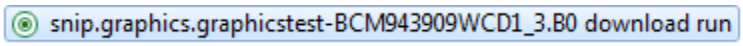
Once the hardware is properly configured, and you have built the 'hello world' application, you should see the below on your display:



1.3 Graphics Test application

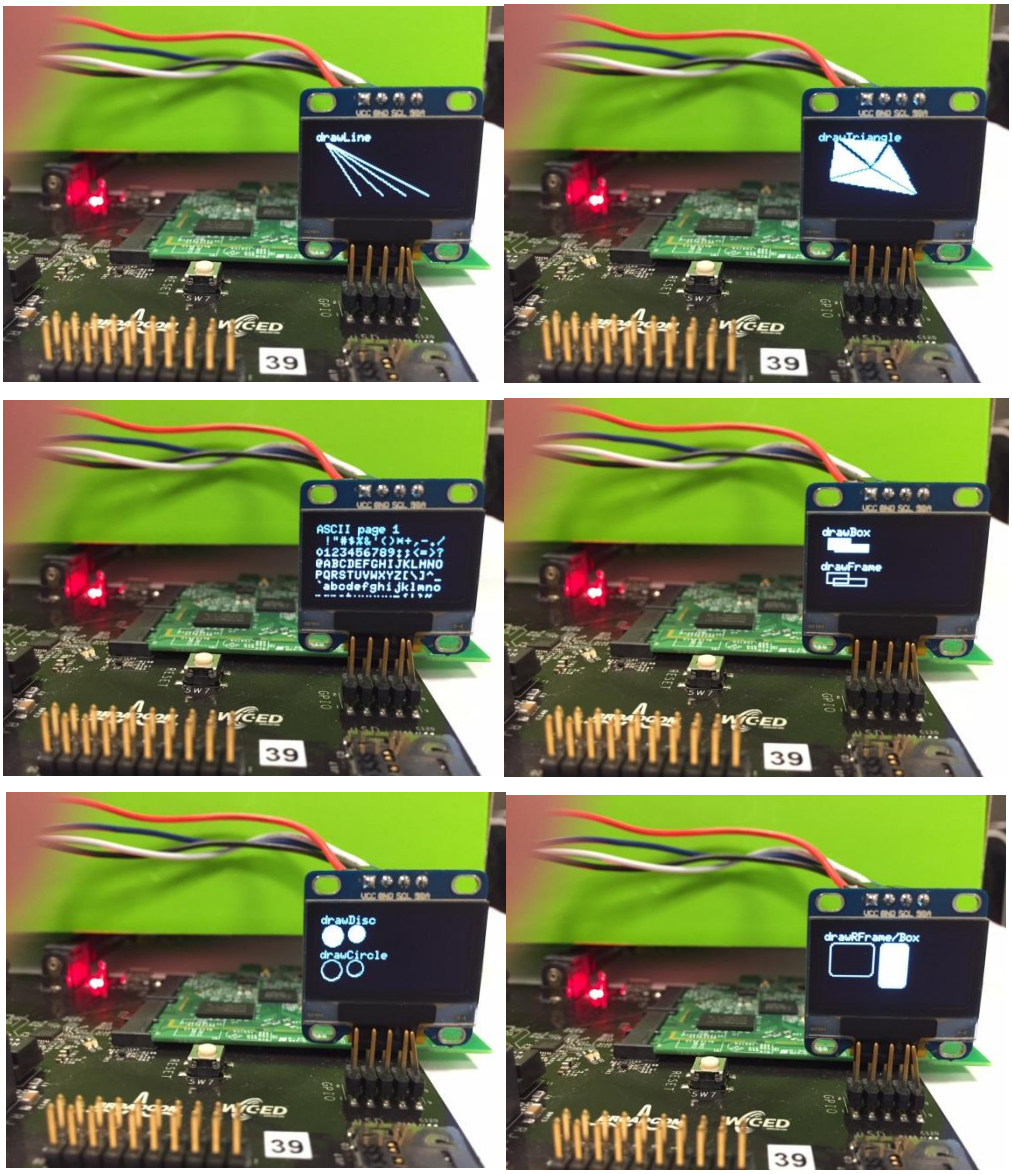
This advanced application shows all of the graphics capabilities of the u8g graphics library, similar to the hello test application; it demonstrates all of the features of the library. Follow these steps below to try out the demo:

- See the WICED-SDK\apps\snip\graphics\graphicstest\graphicstest.c file 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 I^2C 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:



1.4 Additional Information

Many additional I^2C 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

Document Revision History

Document Title: WICED Display U8G Development

Document Number: 002-21469

Revision	ECN	Issue Date	Description of Change
–	–	08/07/2015	**WICED-DISPLAY-R 1.0:** Initial release
		09/18/2015	**WICED-DISPLAY-R 1.1:** Updated examples and pictures, additional info provided for reference
**	5898116	09/27/2017	Converted to Cypress template

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