

SYG-S7G2-43C-MDK

Quick Start Guide



FDI *Future Designs, Inc.*
Your Development Partner

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I.0 Introduction

The Future Designs, Inc. SyG™ Family provides a complete and qualified Graphical User Interface (GUI) / Human Machine Interface (HMI) platform for the rapid release of customer products. The core of SyG (pronounced, “sig”) is Renesas Synergy™ – a comprehensive and integrated software-based microcontroller platform. FDI adds the Synergy platform to its GUI hardware, systems and production expertise. The end result is a sum of high-quality products that provide a robust and proven source for GUI and HMI solutions:

SyG = Renesas Synergy+ GUI

The SyG-S7G2 4.3” PCAP Modular Development Kit is optimized to save development time in typical embedded control applications. The modular format uses a base carrier board, a Renesas Synergy S7G2 SOM (System on Module) and an LCD carrier board. The base carrier board includes expansion connectors for added flexibility and a range of configurations. FDI offers low cost customization services for customer specific hardware, software or packaging applications at volumes of 500 units or more.

For the latest version of the Quick Start Guide visit TeamFDI.com/SyG.

2.0 Prerequisites

2.1 Kit Contents

- SYG-S7G2-SOM
- Carrier Board
- LCD Carrier Board
- 4.3” WQVGA PCAP Touch Screen LCD
- 5V DC Center Positive 2A Power Supply
- Segger J-LINK Lite for Cortex-M with USB Type A to USB Type Mini-B cable
- USB Flash Drive
- 3 ft. CAT5 Ethernet Cable
- USB Type A to USB Type Mini-B cable
- Quick Start Guide

2.2 Required Software and Tools

- PC with Windows 7 or Windows 8
- e² studio Integrated Solution Development Environment (ISDE) from Renesas
- Renesas Synergy™ Software Package (SSP)
- GNU tool chain for ARM® Cortex®-M MCUs
- 7-zip



NOTE: Access to the Synergy Beta site is restricted to authorized Renesas Synergy beta program participants. If you require access to this site, contact your Renesas representative.

The GNU tool chain and installation instructions for the tool chain are included in the e² studio ISDE download.

2.3 Software Installation

To install the tools, follow these steps:

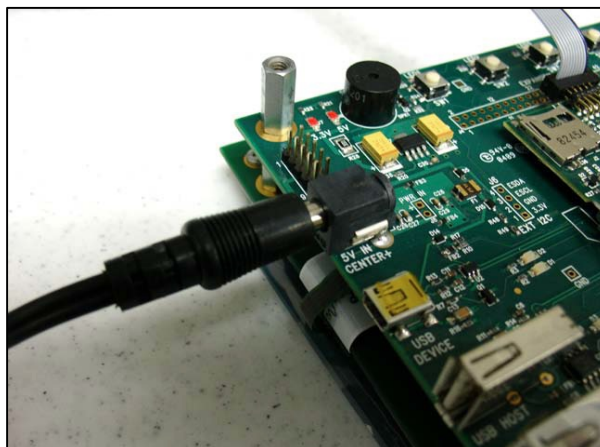
- 1) For optimal results extracting e² studio ISDE and Renesas SSP files, download the latest version of 7-Zip from <http://www.7-zip.org>.
- 2) Download the latest version of the e² studio ISDE from <https://synergybeta.renesas.com/> and extract the files using 7-zip.
- 3) Download the latest version of the SSP from <https://synergybeta.renesas.com/> and extract the files using 7-zip.
- 3) Locate the ISDE_Installation_Guide within the e² studio ISDE file directory. Follow the installation instructions provided in the document.

NOTE: Renesas SSP includes the license file in its installation directory at “<Install Directory>\ISDE\internal\projectgen\arm\Licenses”. You must load the license file prior to initiating the first Renesas Synergy project into the e² studio ISDE.

3.0 Startup Procedure

3.1 Power On Board

To power the boards and run the demonstration software, connect the provided 5V power supply to the SYG-S7G2-43C-MDK kit. The device will start up and will load the demo program from the internal flash.

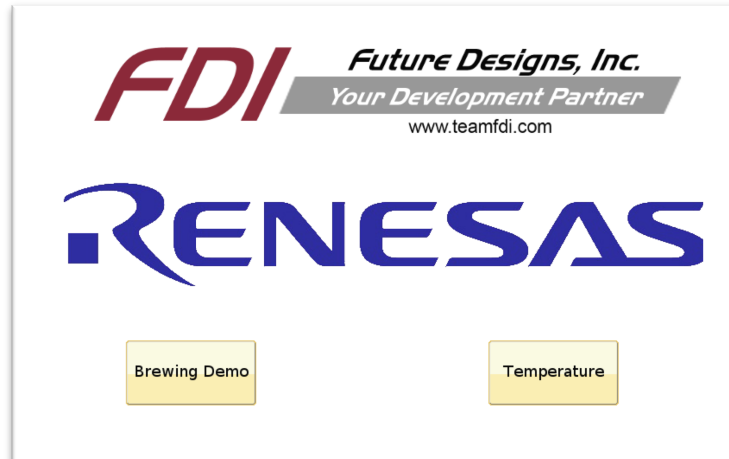


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3.2 Load Demonstration Software

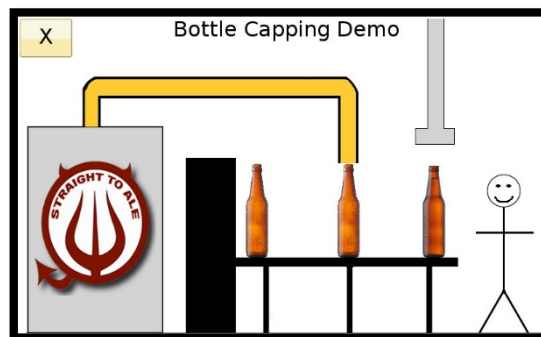
Once the device is powered on, the demonstration software start menu will appear on the LCD screen. The software consists of the brewing demonstration and temperature demonstration.



(Demonstration software start menu)

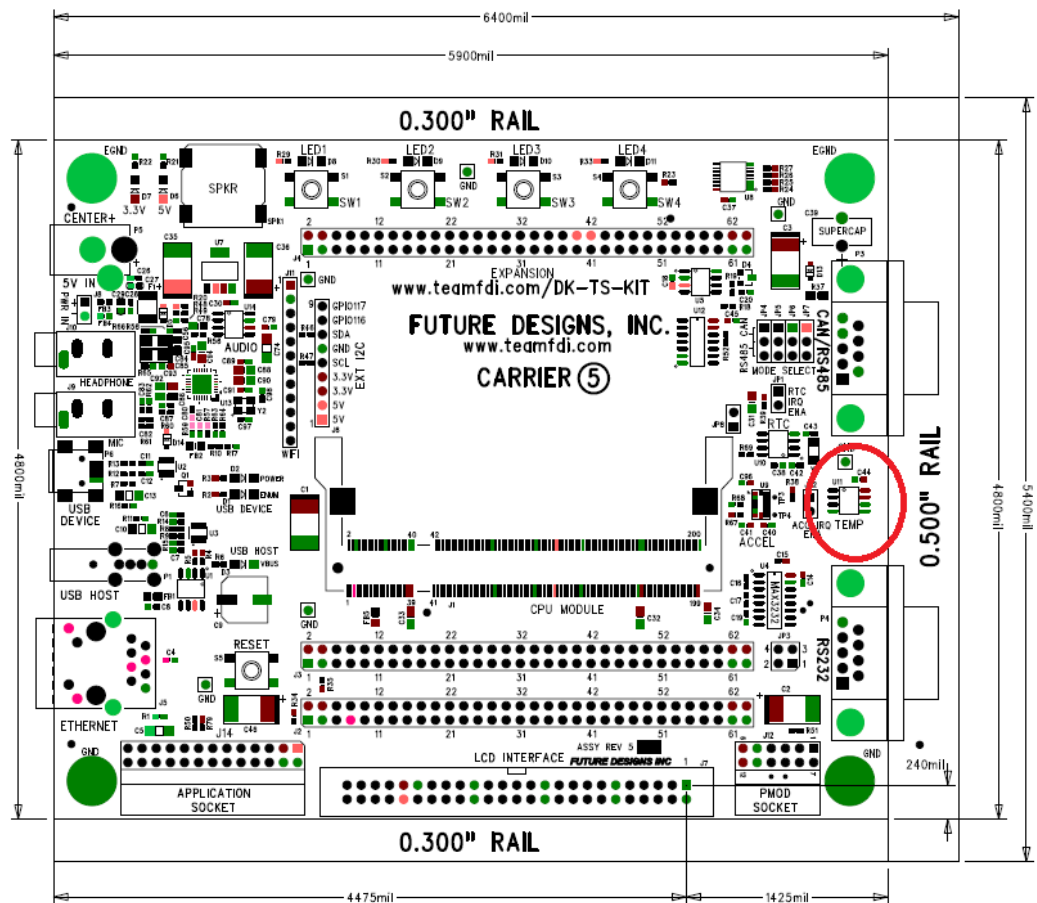
3.2.1 Brewing Demonstration

To launch the Brewing Demonstration tap the “Brewing Demo” button on the demonstration software start menu. The purpose of the Brewing Demonstration is to showcase Renesas SSP’s sprite animation capability. Bottles appear to move down the production line, fill with a liquid, and the man drinks the liquid.



3.2.2 Temperature Demonstration

To launch the Temperature Demonstration, tap the “Temperature” button on the demonstration software start menu. This interactive demonstration displays the temperature of the processor and the temperature measured by an optional external sensor. Clicking on the “Deg. C” or “Deg. F” button will change the degree scale in which the temperatures are displayed. If you have a can of air duster, apply it over the external sensor located Component U11 on the Carrier Board and watch the temperature drop!



4.0 What's Next?

4.1 Blinky Demo

The Blinky Demo is currently under development. It will provide instructions for a sample e² studio project that will allow the user to learn about the ISDE and make an LED on the board blink.



5.0 Support

5.1 Where to Get Help

Online technical support is available at <http://www.teamfdi.com/support/>

5.2 Useful Links

- Future Designs Inc. Forums: http://www.teamfdi.com/?post_type=forum
- SYG-S7G2 4.3" PCAP Modular Development Kit Product Page: <http://www.teamfdi.com/product-details/syg-s7g2-43c-mdk/>
- Renesas Synergy: <https://synergybeta.renesas.com/>
- SEGGER J-Link LITE: <https://www.segger.com/jlink-lite-cortexm.html>
- Renesas Forums: <http://www.renesasrulz.com/>
- 7-Zip: <http://www.7-zip.org>

