

Synergy™ Platform IoT Enabler Kit - S7G2 MCU Group

In the box



The following components are included in the SK-S7G2 IoT Enabler Kit:

1	SK-S7G2 Main Board w/shield	CAT1 Modem Power Supply	7
2	Verizon SIM Card	CAT1 Modem Antennas (2 ea)	8
3	Quick Start Guide	Haptic Vibration Motor w/cable	9
4	GT202 WiFi PMOD Board	4GB USB Thumb Drive	10
5	CAT1 Modem PMOD Board	Ear buds	11
6	AMS Sensor PMOD Board	Micro USB Cable	12

Overview

This kit and the associated development tools allow you to evaluate the Renesas Synergy™ S7G2 IoT Enabler platform. This Quick Start Guide shows you how to run the pre-loaded SmartWine demonstration software. These instructions are condensed. For full instructions for Lab 1 and how to run the additional lab procedures included with the SK-S7G2 IoT Enabler Kit, please see the IoT_Enabler_Kit_Labs sub-directory on the included USB drive. The Lab 1 document is called SmartWine.pdf. Lab 2 is called RemoteSongPlayer.pdf and lab 3 (in three parts) is called FunWithSensors.pdf.

SK-S7G2Kit

NOTE: This Quick Start Guide is for the S7G2 IoT Enabler Kit, which is based on the SK-S7G2 rev3.0 board.

Prerequisites

Required infrastructure

- PC with one free USB 2.0/3.0 port. No drivers are required for Lab 1.
- 802.11b/g/n Wireless Access Point (WAP) with Internet connection.

Wireless Access Point (WAP) Settings

The GT202 WiFi PMOD board requires the SSID, security setting and shared passphrase from the external wireless access point (WAP) in order to send its data to the dashboard. This information is located in a file named **wifi.txt**. This file is read from the root directory of the USB thumb drive when the SmartWine software is started. The WAP must provide DHCP service to the GT202 WiFi board and be connected to the Internet. Below is the content of the default **wifi.txt** file on the USB drive.

```
mode=client
encryption=ccmp
security=wpa2
ssid=TP-LINK_4C50B6
key=pennygetyourownwifi
```

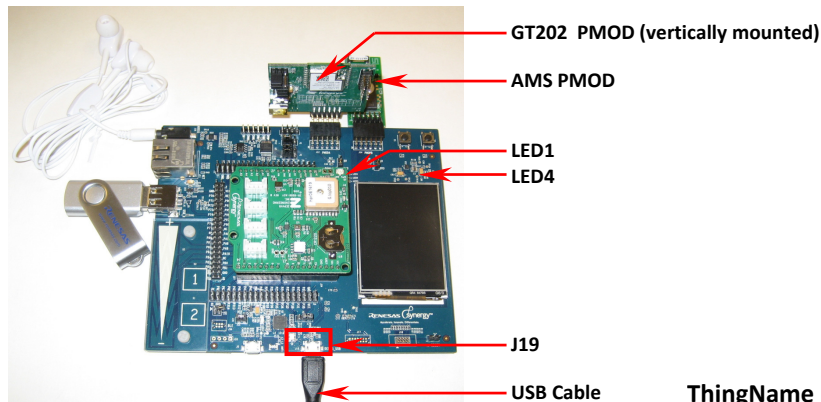
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Make sure that the first three lines appear exactly as shown. Set the ssid value on the fourth line to the SSID of the Access Point that you are using (or set the WAP to this SSID). Set the key to the passphrase that your WAP is expecting (or set the passphrase in the WAP to match what is in the file). The WAP should be set to 802.11g mode, use wpa2 wireless security, have a DHCP server running on the WiFi side and have access to the Internet on the WAN side.

NOTE: The software looks for **wifi.txt** by name in the root directory of the USB drive. Do not change the name of the **wifi.txt** file or move it from the root directory of the USB drive.

Connecting the board components

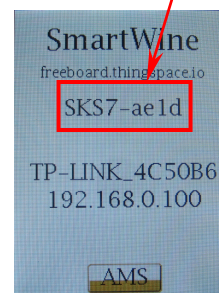
Connect the components as shown below to run the Lab 1 SmartWine demonstration.

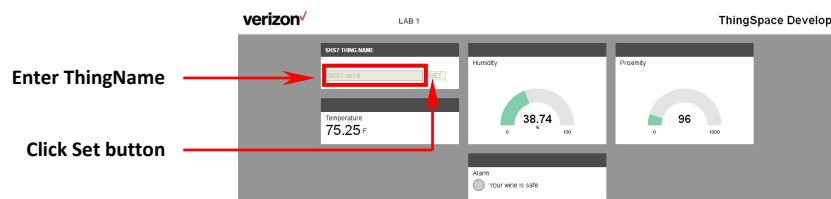


Running the Out-of-Box Demo

To power up the board and get started with the pre-loaded Out-of-Box SmartWine Demo, connect the SK-S7G2 board J19 (DEBUG_USB) micro USB connector to a USB port on your PC using the supplied cable. Green LED4 lights, indicating power. Wave your hand over the AMS PMOD sensor board and you will see a proximity alert pop up on the LCD screen. Touch the AMS button on the LCD touch-screen to view the temperature and humidity readings from the sensors on the AMS PMOD board.

Make sure that your LCD is showing an SSID and IP address and green LED1 is lit. This indicates that you have a WiFi connection to the AP and received a DHCP address. Go to the ThingSpace Dashboard located at freeboard.thingspace.io/board/0ZwMxr and enter your ThingName (shown on the LCD screen in the format SKS7-xxxx, where xxxx is a unique hex number) in the box at the upper left. The Dashboard should now be updating with data from your sensors. Try waving your hand over the AMS PMOD sensor board to see what happens on your Dashboard.





Next steps

Quickly access Renesas Synergy™ Platform documentation and sample project downloads from <http://www.renesas.com/synergyapplicationprojects>. Here you will find

- Source code for the SmartWine, RemoteSongPlayer and FunWithSensors labs
- Application Notes
- Sample projects with source code and documentation
- Datasheets
- User Manuals and Quick Start Guides

CAT1 Modem Provisioning

The CAT1 Modem PMOD board requires provisioning before it will transmit and receive data. A Verizon data account is required. A 30-day, 1GB account is included with your SK-S7G2 IoT Enabler Kit. The CAT1 modem is not used for Lab 1, but provisioning information is included here (as well as in the instructions for Lab 2). If you are attending a class, the provisioning will be done for you in advance and your Verizon data account will be active at class time. If you are not attending a formal class, send an activation request email to iotdeveloper@verizon.com containing the following information:

- Name
- Company
- Title
- e-mail address
- 20-digit SIM Card ID
- 15-digit modem IMEI



Reloading the Out-of-Box Demo

If you want to reload the original Out-of-Box SmartWine application, you can find it and the instructions to reload it on the USB drive in the file **IoT_Enabler_Kit_Labs/SmartWine.pdf**.

Support

Support: <https://synergygallery.renesas.com/support>