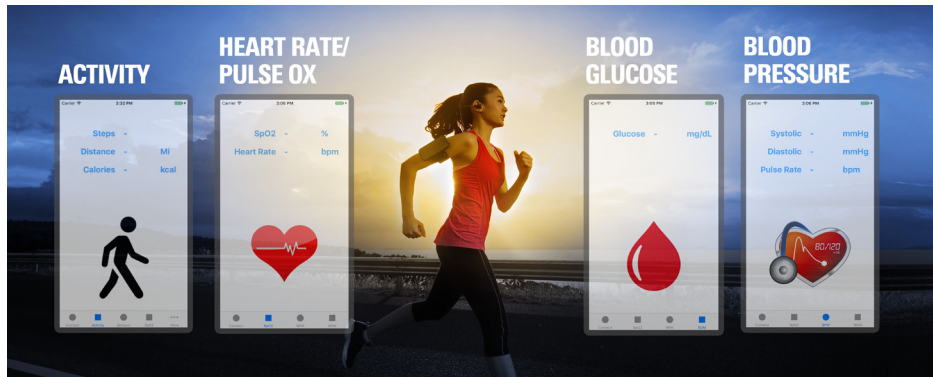


Healthcare Meters Kit for Quick Prototyping and Productization

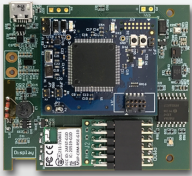
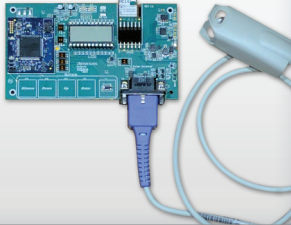
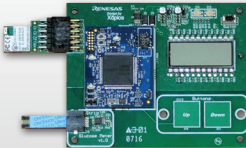
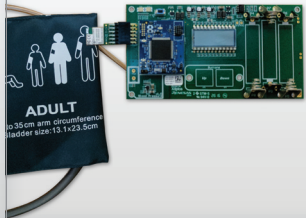


Kit Highlights

- Activity, HRM/SpO2, BGM and BPM modules
- Complete kit to monitor key vitals
- Form factor designed for easy debugging and prototyping
- Mobile access via iOS and Android apps

As part of Renesas' expanding healthcare solutions offering, we developed the Healthcare Meters Kit as a proof of concept – one that enables customers to reduce their time to market. The kit contains four fully functional modules: activity, heart rate/pulse oximeter, blood glucose and blood pressure.

Renesas Healthcare Meters Kit Modules

Activity	Heart Rate/Pulse Ox	Blood Glucose	Blood Pressure
Activity module is loaded with sensors – ambient light, pressure, humidity, temperature, haptic, and a 9-axis motion, which lends itself for implementing a variety of algorithms. Out of the box, the module measures and displays, using all the sensors, the following parameters on the mobile app: steps, distance, calories, active time and raw data. Wireless and USB charging capabilities are provided for flexibility, along with the fuel-gauge function for the battery.	Heart Rate/Pulse Ox module uses a finger-based optical sensing technique to determine the heart rate and pulse ox parameters, which are displayed on the LCD display and mobile app. Battery charging is done through a USB port, and touch buttons let you switch between modes.	Blood Glucose module uses an electrochemical strip technology to measure blood glucose, which is displayed on the LCD display and mobile app. Coin cell battery powers the module, and touch buttons let you change settings.	Blood Pressure module uses a cuff, plus pump method, to monitor blood pressure, which is displayed on the LCD display and mobile app. Standard AA batteries power the module, and touch buttons let you change settings.
			

The Healthcare Meters solution kit showcases the Renesas Synergy™ Platform, featuring the Synergy S3 MCU, RL78/G1D MCU, and the USB Charger IC. Renesas Synergy is a complete and qualified platform that accelerates embedded development, inspiring innovation and enabling differentiation. The RL78/G1D is an industry-leading, true low power MCU that features Bluetooth® low energy technology. Renesas also has a portfolio of USB battery charger ICs.

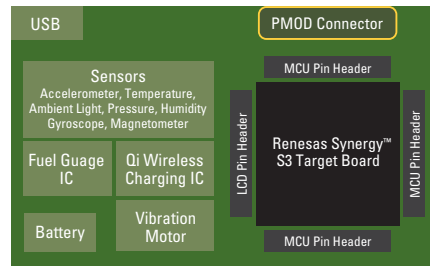
Customers have the option to use Wi-Fi or cellular technology for connectivity instead of the provided Bluetooth low energy technology. The mobile app can be further enhanced by providing back-end connectivity to a cloud platform and building a dashboard in the cloud. These dashboards can be a single point of interaction between the doctor, caregiver/family and patient.



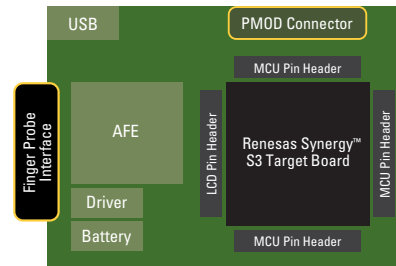
Features

- Wireless charging
- Fuel gauge
- USB charging
- Bluetooth low energy technology
- LCD screen
- Touch buttons
- Sensors on activity module
 - Ambient light
 - Pressure
 - Humidity
 - Temperature
 - Haptic
 - 9-axis motion

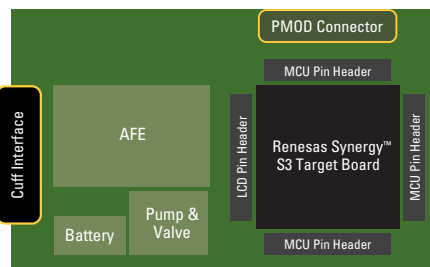
Activity Module



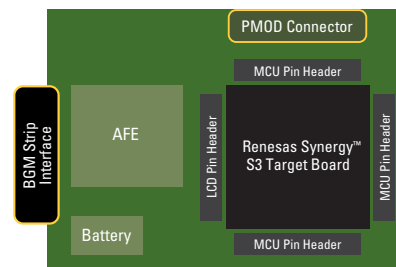
Heart Rate/Pulse O₂ Module



Blood Pressure Module



Blood Glucose Module



For more details on the Healthcare Meters Kit, visit:

<https://www.renesas.com/en-us/solutions/home/healthcare/hckit.html>

For more details on RL78G1D, visit:

<https://www.renesas.com/en-us/products/microcontrollers-microprocessors/rl78/rl78g1x/rl78g1d.html>

Visit our Healthcare Solutions page at:

<https://www.renesas.com/en-us/solutions/home/healthcare.html>

For more information on Renesas Synergy, visit:

<https://www.renesas.com/en-us/products/synergy/features.html>

Renesas MCU Ecosystem



Consultant and tool vendor network

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University program

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