BLOOD PRESSURE MONITORING EVALUATION KIT FOR HEALTHCARE

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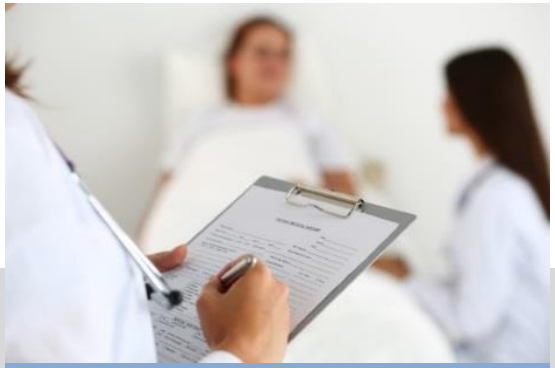
HOME BUSINESS DIVISION
RENESAS ELECTRONICS CORPORATION

TRENDS IN HEALTHCARE: FROM HOSPITAL TO HOME AND FROM DIAGNOSIS TO PREDICTIVE



Hospital

High-performance medical equipment
Doctor's examination / diagnosis
(MRI / CT / organ sound / palpation etc.)

Home

Stationary · compact medical equipment that collect daily health information (Body weight, blood pressure, body temperature)

Daily

Wearable devices that collect 24-hour biological information (Pulse, etc.)

Health maintenance

Disease prediction

- Increase in medical expenses due to declining birthrate and aging population at both national and individual level

TRENDS IN BIOMETRIC INFORMATION MEASUREMENT AND RENESAS SOLUTIONS

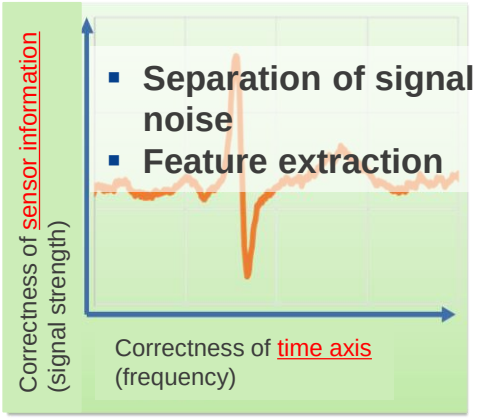
Anytime, anywhere (constant measurement), unnoticed (non-invasive), accurate measurement

Single measurement	Easy-to-use measurement	Constant measurement	Disease sign detection
	**Wearable devices** ▪ Watch type (iWatch etc.) ▪ Clip type (Fitbit etc.)	▪ Patch type ▪ Wear type	▪ Use of e-AI ▪ Predictive detection algorithm

Renesas solutions

Sensing for blood pressure meter, etc.

Correct sensing



Analysis of time series data

BLOOD PRESSURE MEASUREMENT EVALUATION KIT FOR IMMEDIATE EVALUATION

Easy-to-Use Evaluation Kit Combines Hardware and Development Tools for Developing Blood Pressure Monitoring Applications

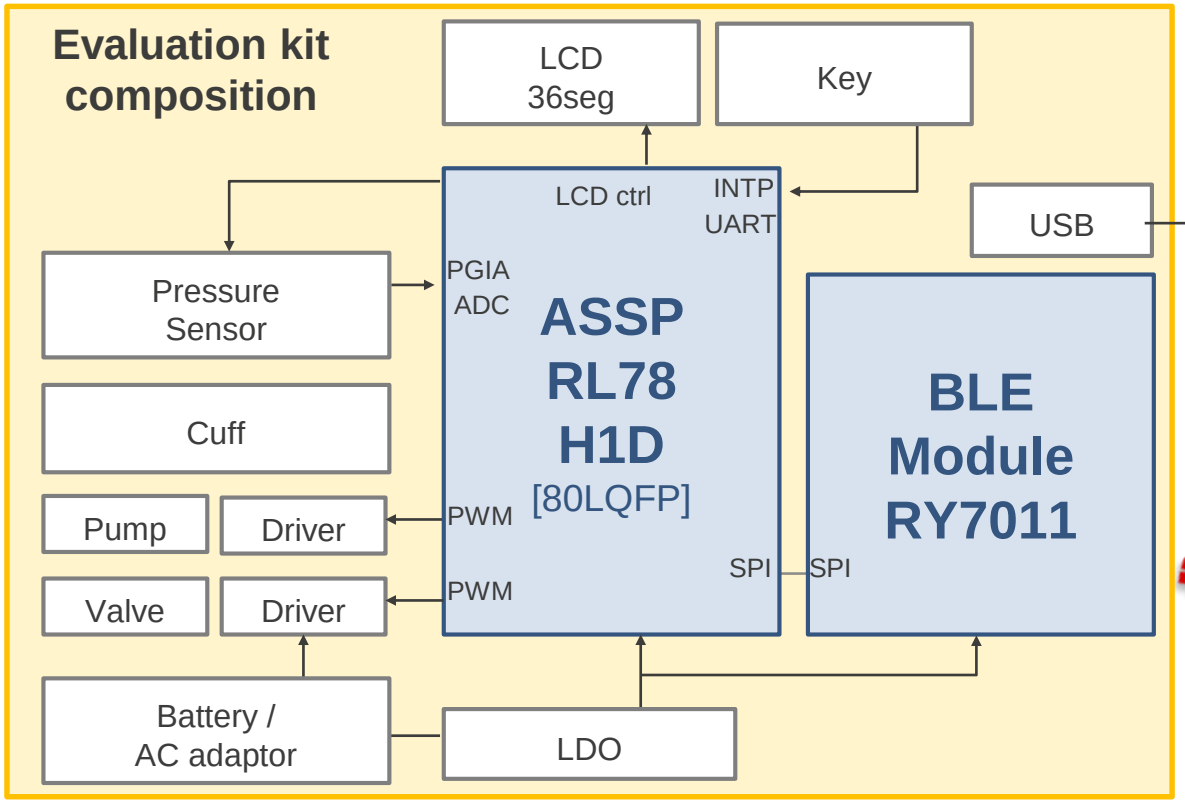
1. One-stop solution including all functions in one kit for immediate evaluation
2. Development support with GUI tool specialized for blood pressure measurement
3. Built-in RL78/H1D ASSP with analog functions optimized for healthcare

1. BLOOD PRESSURE MONITORING EVALUATION KIT

The kit enables immediate evaluation of the blood pressure measurement system and significantly shortens development time

Inside the evaluation kit

Evaluation kit composition

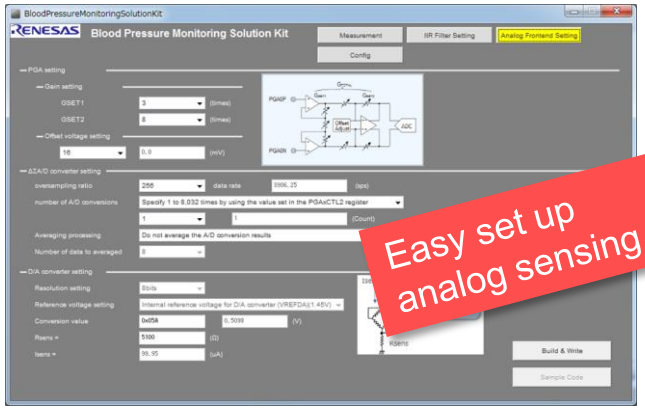


GUI tool

Smartphone app

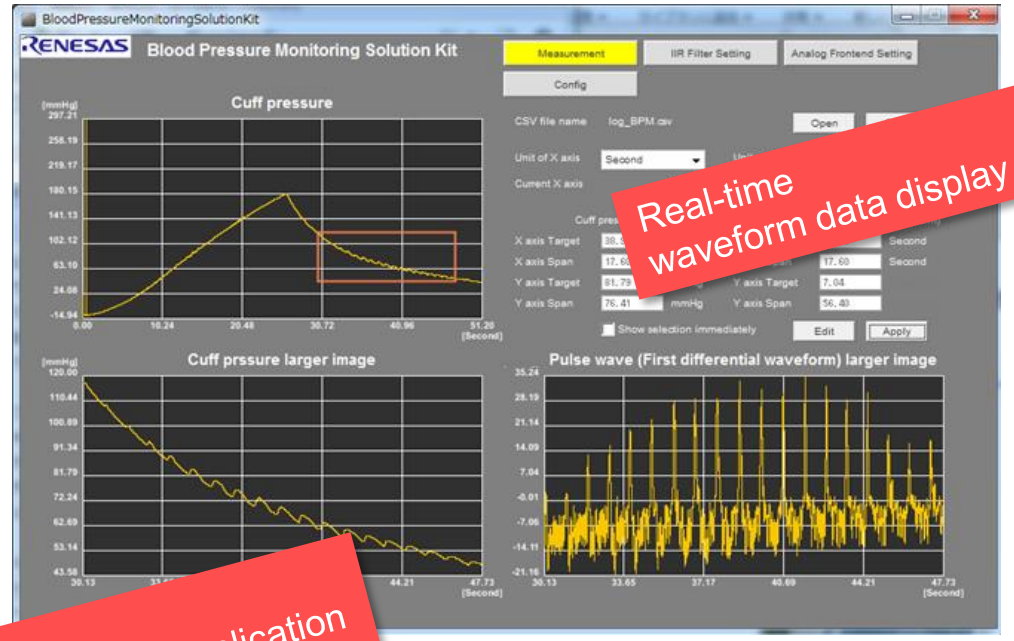
2. DEVELOPMENT SUPPORT WITH GUI TOOL SPECIALIZED FOR BLOOD PRESSURE MEASUREMENT

Analog settings



Easy set up analog sensing

Measurement results



Real-time waveform data display

IIR filter calculation (sim & setting)

Digital filter simulation
※user can set up parameter of its actual application based on IIR filter calculation results

3 . BUILT-IN RL78/H1D ASSP WITH ANALOG FUNCTIONS OPTIMIZED FOR HEALTHCARE

Ideal for sensing in healthcare applications including blood pressure monitors

Built-in high precision analog functions

- 24-bit ⊿ΣA/D Converter
- 10-bit SAR A/D Converter
- PGA x 2ch, general-purpose operational amplifier x 3ch (*1)
- 8-bit D/A Converter x 1ch, 12-bit D/A Converter x 1ch (*1)
- Constant voltage source for sensors

*1: 80-pin LQFP has restricted analog functions, PGA x 1ch, general-purpose operational amplifier x1ch, 8-bit D/A Converter x 1ch

LCD controller

- 80-pin LQFP: 36seg 4com/32seg 8com
- 64-pin LQFP: 27seg 4com/23seg 4com

Compact package

- 64-pin BGA: 4mm x 4mm (no LCD control)
- 48-pin LQFP:7mm x 7mm (no LCD control)

Flash ROM	Data/ Flash	RAM	80-pin LQFP	64-pin LQFP	64-pin BGA	48-pin LQFP
128 KB	4 KB	5.5 KB	●	●	●	●
96 KB	4 KB	5.5 KB	●	●	●	●
64 KB	4 KB	5.5 KB	●	-	-	-
			High precision analog			
			LCD Control	LCD Control	-	-

80-pin LQFP

64-pin LQFP

64–pin BGA

48-pin LQFP

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