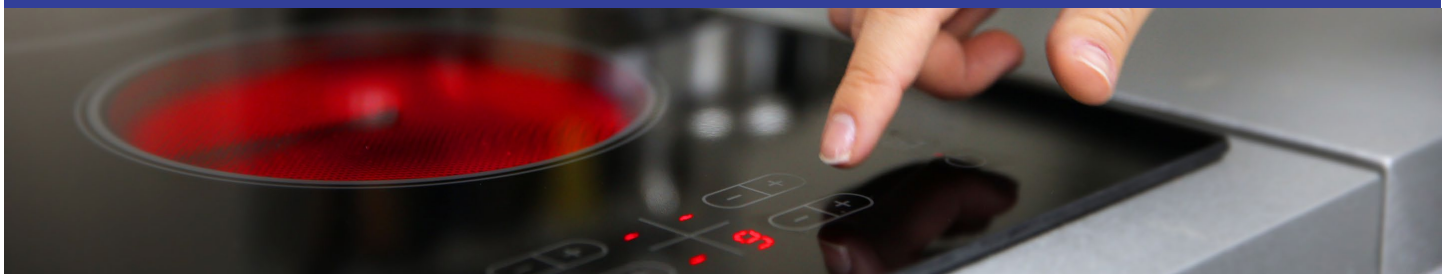
Ultra-Low Power Consumption with Fast Standby Recovery

# RENESAS RX100 MCU SERIES



Renesas RX100 MCU series is developed based on RX proprietary core, providing cost optimization with high performance for applications such as health care, portable devices, industrial equipment by embedding touch sensor and HMI functions in a compact package. With an industry-leading ultra-low power consumption and faster standby recover, it is suitable for energy-saving products.

**Consumer (battery drive)**

Sensor hubs
(smartphones, game consoles, PCs, tablets),
digital cameras, digital camcorders

**Healthcare**

Healthcare devices,
wearable devices

**Home appliances**

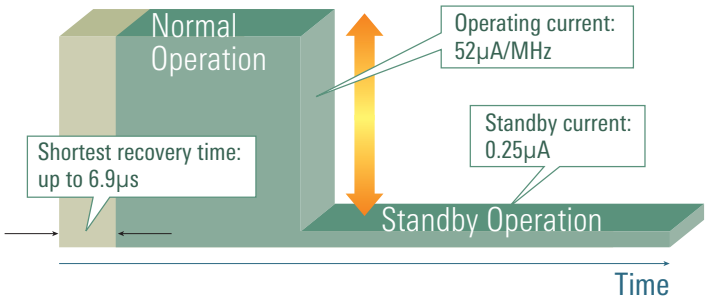
Cooking appliances,
water heaters

**Industrial**

Power meters,
detectors (smoke detectors, etc.),
pressure gauges, thermostats

## Benefits/ Key Features

### Industry-Leading Ultra-Low Power Consumption



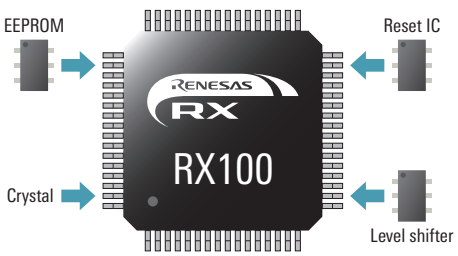

- Ultra-low current consumption operation in both standby and operation modes
- Ultra-fast recovery from standby mode
- Ideal for battery and battery-powered applications

### Functions Suitable for Various Applications

| RX100 Functions and Specification | Home Appliances | Healthcare | Portable | Industrial |
|---|---|---|---|---|
| 5V operation | ✓ | - | - | - |
| HMI (Touch, LCD) | ✓ | ✓ | ✓ | ✓ |
| Communication (CAN, USB) | - | ✓ | ✓ | ✓ |
| Security (AES) | ✓ | ✓ | ✓ | ✓ |

### Excellent Cost Performance

- Small pin / Small ROM lineup
- BOM reduction by incorporating peripheral ICs
- High compatibility between RX families help to reduce development costs for other RX products



# RENESAS RX100 MCU SERIES

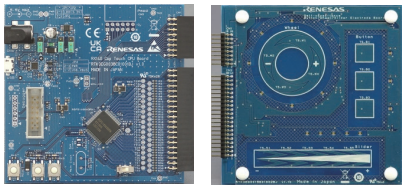
## Product Information

| Product | CPU | Supply Voltage | Flash/ SRAM | HMI | | Communication | Analog | Security | Low Power Consumption | |
|---|---|---|---|---|---|---|---|---|---|---|
| RX140 | RXv2 48MHz | 1.8V to 5.5V | 256KB/ 64KB | Touch key | - | CAN | 12-bit ADC 8-bit DAC | AES | Low power timer | Snooze |
| RX130 | RXv1 32MHz | 1.8V to 5.5V | 512KB/ 48KB | Touch key | - | Remote control reception | 12-bit ADC 8-bit DAC | - | Low power timer | - |
| RX113 | RXv1 32MHz | 1.8V to 3.6V | 512KB/ 64KB | Touch key | Segment LCD | USB | 12-bit ADC 12-bit DAC | - | Low power timer | - |
| RX111 | RXv1 32MHz | 1.8V to 3.6V | 512KB/ 64KB | - | - | USB | 12-bit ADC 8-bit DAC | - | - | - |
| RX110 | RXv1 32MHz | 1.8V to 3.6V | 128KB/ 16KB | - | - | - | 12-bit ADC | - | - | - |

## Solution/ Development Environment

### Starts development immediately with RX140 touch key evaluation system

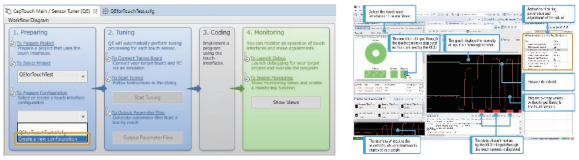
- Third-generation touch IP (CTSU2SL) dramatically improves noise resistance and water resistance
- Includes microcomputer board and touch key-boards
- For button/slider/wheel evaluation
- Immediate evaluation applicable to user's custom board



RX140 Capacitive Touch Evaluation Kit

### Reduce development man-hours

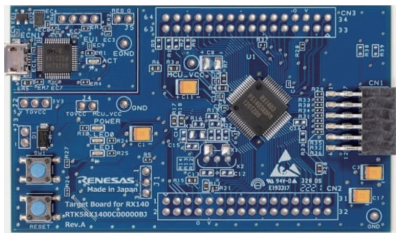
- Easy sensitivity adjustment with QE for Capacitive Touch
  - Easy operation with an intuitive GUI interface
  - Auto adjusted source code output
- Maintenance of touch-only driver
- Extensive application notes
- Immediately resolve questions on the FAQ site



QE for Capacitive Touch

### Target Board for RX140

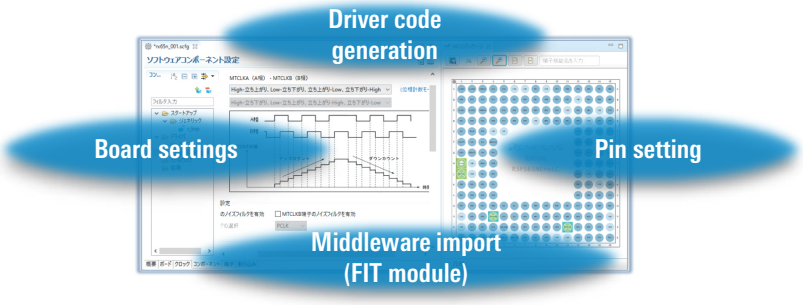
- Easy evaluation of RX140 is possible
- Initial evaluation of third-generation touch is possible by implementing the LPF capacitors
- Through hole with access to all pins
- No emulator purchase required (installed on the board)



Target Board for RX140

### Smart Configurator

Terminal setting, code generation, middleware import possible




## Long-term Product Supply Program

Renesas Electronics operates a long-term product supply program (commonly known as PLP: Product Longevity Program) so that customers with long equipment life cycles can select products with peace of mind. We will supply for up to 15 years.

15 YEARS RENESAS Product Longevity Program

### For more details, please visit www.renesas.com/RX

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For further information on a product, technology, the most up-to-date version of a document, or your nearest sales office, please visit:
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Document No.: R01PF0204EJ0200