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 recovery, it is suitable for energy-saving products.

### Functions Suitable for Various Applications

<table>
<thead>
<tr>
<th>RX100 Functions and Specification</th>
<th>Home Appliances</th>
<th>Healthcare</th>
<th>Portable</th>
<th>Industrial</th>
</tr>
</thead>
<tbody>
<tr>
<td>5V operation</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HMI (Touch, LCD)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Communication (CAN, USB)</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Security (AES)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### 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

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Ultra-Low Power Consumption with Fast Standby Recovery

RENESAS RX100 MCU SERIES

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

Normal Operation

Standby Operation

Shortest recovery time: up to 6.9µs

Operating current: 52µA/MHz

Standby current: 0.25µA

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.com
**Product Information**

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

**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

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

**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)

**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.

For more details, please visit [www.renesas.com/RX](http://www.renesas.com/RX)