RC-SA01 contactless IC chip supports greatly-enhanced security with the adoption of Advanced Encryption Standard (AES).

**FEATURES**

**[Common]**

- **Highest level of security for contactless smart-card chip**
  RC-SA01 IC chip has enhanced security provided by AES encryption. The product is the contactless IC card chip with embedded software which has acquired EAL6+ certification in accordance with Common Criteria (ISO/IEC 15408), the international standard for evaluation criteria in IT security.

- **Multi-application platform with higher performance and reliability**
  Higher transaction speed is achieved for every type of card application, such as transportation ticket and e-payment. In addition, the IC chip achieves lower power consumption than the current FeliCa™ IC chip. The new Error Checking and Correcting (ECC) functionality improves the reliability of non-volatile memory data.

- **Able to communicate with NFC Forum-compatible readers**
  The chip complies with Type 3 Tag functionality defined by the NFC Forum. Therefore, the card with the chip can communicate with NFC-compatible smartphones and readers.
### PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication method</strong></td>
<td>Conforms to ISO/IEC 18092 (212 kbps or 424 kbps Passive Communication Mode)</td>
</tr>
<tr>
<td><strong>Operating frequency</strong></td>
<td>13.56 MHz</td>
</tr>
<tr>
<td><strong>Communication speed</strong></td>
<td>212 kbps and 424 kbps automatically switchable</td>
</tr>
<tr>
<td><strong>Supported encryption</strong></td>
<td>AES encryption</td>
</tr>
<tr>
<td><strong>Supported commands</strong></td>
<td>AES-encrypted commands, Non-encrypted commands</td>
</tr>
<tr>
<td><strong>Non-volatile memory</strong></td>
<td>4 Kbyte EEPROM, 160 blocks (1 block=16byte)</td>
</tr>
<tr>
<td><strong>Data retention period</strong></td>
<td>50 years (25 °C), 10 years (85 °C)</td>
</tr>
<tr>
<td><strong>Write endurance</strong></td>
<td>500,000 times (25 °C), 100,000 times (85 °C)</td>
</tr>
<tr>
<td><strong>Storage temperature</strong></td>
<td>-55 °C to +125 °C</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>-25 °C to +100 °C</td>
</tr>
</tbody>
</table>

*Quality and reliability are assured when the operating temperature is within the range of -25 °C to +85 °C.*

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### TYPICAL SYSTEM LAYOUT

![System Layout Diagram](image)

- For technical documents about this product, see "Technical Information" on the FeliCa website:
sony.net/Products/felica/business/tech-support/

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- Note that TM and ® symbols are sometimes purposely omitted from this text.

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