The “FeliCa™”, contactless IC card system combines multiple services, such as e-money, employee ID, membership and access control onto a single smart card. FeliCa has developed into a high-performance multi-application IC card system, with greater data capacity, faster processing speed and higher security than other contactless IC cards. The new RC-S880 contactless IC card is a card capable of meeting future needs and more.

**OVERVIEW**

- Contactless communication between the Reader/Writer and the card is activated by electromagnetic waves radiated from the Reader/Writer antenna. FeliCa technology complies with ISO/IEC 18092 communication protocol.
- The card is durable and thin - conforming to ISO/IEC7810 ID-1 size.
- The basic material of the card is PET plastic - an environmentally friendly option, which can be easily recycled and exerts minimal adverse influence on the environment.

**FEATURES**

- **Large Capacity for Multi-Application**
  - RC-S880 contains a 9KB IC chip (RC-S960) to support large memory application requirements*. The card can store large amounts of data, suitable for biometric authentication, e-ticketing applications, and so on. A single card can also store loyalty points, coupons and numerous other services.
  - * Compared to SONY RC-S860.

- **Fast Processing Speed**
  - RC-S880 can complete all card detection, mutual authentication and read/write transactions, including encryption and decryption within only 0.1 seconds with Reader/Writer. The new Ferroelectric Random Access Memory (FRAM) dramatically improves*1 data-processing speed for faster read/write results.
  - The new card supports both the conventional data transfer rate of 212kbps and the double data transfer rate of 424kbps*2. The card automatically adjusts both the incoming and outgoing data transfer rate according to the speed of the Reader/Writer to provide the high speed communication in a seamless manner.
  - *2. For more information about the 424kbps data transfer rate, contact Sony Corporation.

- **High Security**
  - RC-S880 is a secure IC card based on a secure IC chip which has superior tamper resistant characteristics.
  - The IC chip hardware and the IC chip including both hardware and software are certified to ISO/IEC 15408 (“Common Criteria for Security Evaluation”), levels of assurance: EAL4+ and EAL4 respectively.

- **Better Data Rewrite Endurance**
  - RC-S880 offers improved memory performance* (with a data rewrite endurance of 10 billion cycles), for high-frequency use.
  - * Compared to SONY RC-S860.
### PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>RC-S880</th>
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#### Antenna
- 100 mm (when using RC-S462C, RC-S460C/S461C*5)
- 50 mm (when using RC-S260*)
- 30 mm (when using RC-S462B, RC-S460B/S461B/S490B/S491B*5)
- 27 mm (when using RC-S270)
- 20 mm (when using RC-S600)
- 5 mm (when using RC-S320/S330)

#### Communication distance

- Supports automatic 212kbps/424kbps switching (at 13.56MHz operating frequency)*6

#### Communication method
- Compliant with ISO/IEC 18092 (212kbps/424kbps Passive mode)

#### Operating frequency
- 13.56MHz

#### Modulation system
- ASK modulation

#### Bit coding
- Manchester encoding system

#### Communication speed
- Supports automatic 212kbps/424kbps switching (at 13.56MHz operating frequency)*5

#### Operating temperature/humidity
- 0 °C to 40 °C / 20% RH to 90% RH
- 40 °C to 50 °C / 50% RH or less

#### Storage temperature/humidity
- -10 °C to 80 °C / 80% RH or less

#### Dimensions (H × W × D)
- 54.0 × 85.6 × 0.76 mm (Conforms to ISO/IEC 7810-ID-1 type cards)

#### Mass
- Approx. 5g

#### Basic material
- Uses plastic material such as PET which exerts minimal effects on the environment even if incinerated.

#### Nonvolatile memory

<table>
<thead>
<tr>
<th>Type</th>
<th>9K bytes FRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>User memory</td>
<td>6,400 bytes (16 bytes x 400 blocks)</td>
</tr>
<tr>
<td>Data retention performance</td>
<td>10 years (at 70 °C)</td>
</tr>
<tr>
<td>Rewrite endurance</td>
<td>10 billion (at 55 °C) *Continuous read = 1 billion (at 55 °C)</td>
</tr>
</tbody>
</table>

#### Security
- Embedded IC chip (RC-S960)

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**Notes:**
1. The communications distance varies according to the user environment. Please note that the specifications reflect the distance in an ideal environment without the effects of peripheral radioactivities and metal obstacles. In addition, it is necessary for the Reader/Writer antenna and RC-S880 to be in parallel and for the median points of both devices to be in a perpendicular line to both objects.
2. Due to the field intensity of Reader/Writer, the operating temperature/humidity may vary.
3. Discontinued model
4. RC-S880 has an IC chip with a security sensor. Use in a hot place or in the vicinity of a powerful magnetic field may activate the security sensor, reset the information on the card and result in communications failure. Check the usable environment and reader/ writer communication status prior to use.
5. At 424kbps transfer rate
6. Please contact Sony Corporation for further details.

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### TYPICAL SYSTEM LAYOUT

![Diagram of system layout]

- Specifications and external appearance are subject to change without prior notice.
- FelCa is a trademark of Sony Corporation.
- FelCa is contactless IC card technology developed by Sony Corporation.

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