The "FeliCa™" contactless IC card system combines multiple services, such as transit ticket, e-money, employee ID, membership and access control onto a single smart card.

Using multi-application functionality, which FeliCa features, various applications can be accessed and processed on a single card.

The RC-S885 is a high security, high performance card that offers improved security and higher processing capacity in comparison to Sony RC-S860 series.

**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**

* Fast Processing Speed
  - RC-S885 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.
* 1. Compared to SONY RC-S860 series.
* 2. Available only when the Reader/Writer to be used also accommodates the 424kbps transfer mode.

* High Security
  - RC-S885 is a secure IC card based on a secure IC chip (RC-S962) with 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.

* Multi-Application
  - FeliCa offers multiple services on a single card. The card can be used in various ways such as transit ticketing, employee ID, access control and e-money for shop, restaurants and vending machines.
  - Additionally, the card can be used for network access control.

* Better Data Rewrite Endurance
  - RC-S885 offers improved memory performance* (with a data rewrite endurance of 10 billion cycles), for high-frequency use.
* 1. Compared to SONY RC-S860 series.
### PRODUCT SPECIFICATIONS

**RC-S885**

**Antenna**

<table>
<thead>
<tr>
<th>Communication distance</th>
<th>100 mm (when using RC-S462C/RS-S460C/S461C)*4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50 mm (when using RC-S240)</td>
</tr>
<tr>
<td></td>
<td>30 mm (when using RC-S462B/RS-S462B/RC-S450B/S461B/S490B/S491B*3)</td>
</tr>
<tr>
<td></td>
<td>27 mm (when using RC-S270)</td>
</tr>
<tr>
<td></td>
<td>20 mm (when using RC-S600)</td>
</tr>
<tr>
<td></td>
<td>5 mm (when using RC-S320/RS330)</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Temperature/Humidity</th>
<th>0 °C to 40 °C (32 °F to 104 °F) / 20%RH to 90%RH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40 °C to 50 °C (104 °F to 122 °F) / 50%RH or less</td>
</tr>
</tbody>
</table>

**Storage temperature/humidity**

- -10 °C to 60 °C (14 °F to 140 °F) / 60%RH or less

**Dimensions**

- Conforms to ISO/IEC 7810 ID-1 type cards

**Mass**

- Approx. 5g (0.17oz.avdp)

**Basic material**

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

#### Nonvolatile Memory

- **Type**: 4K bytes FRAM
- **User Memory**: 2,464 bytes (16 bytes x 154 blocks)
- **Data Retention Performance**: 10 years (at 70 °C (158 °F))
- **Rewrite endurance**: 10 billion times (at 55 °C (131 °F))
- **Continuous read = 1 billion times (at 55 °C (131 °F))

**Security**

- **Embedded IC chip** (RC-S962)

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**TYPICAL SYSTEM LAYOUT**

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

**Sony Corporation**

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