The FeliCa™ contactless IC card system can be used for multiple services, such as transit ticket, e-money, employee ID, membership and access control. Using multi-application functionality, various applications can be accessed and processed on a single card.

**OVERVIEW**

- Contactless communication between the reader/writer and the card is activated by electromagnetic waves radiated from the reader antenna. FeliCa technology complies with ISO/IEC 18092 communication protocol.
- The card is durable - 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**

[Common]

- **Fast Processing Speed**
  RC-S888,RC-S889 can complete all the process-card detection, mutual authentication and read/write transactions, including encryption and decryption within only 0.1 seconds with reader. The new Ferroelectric Random Access Memory (FRAM) dramatically improves*1 data-processing speed for faster read/write results. The card supports both the conventional data-transfer rate of 212 kbps and the double data transfer rate of 424 kbps*2. The card automatically adjusts both the incoming and outgoing data transfer rate according to the speed of the reader to provide the high speed communication in a seamless manner.

- **High Security**
  RC-S888,RC-S889 is an IC card based on a secure IC chip (RC-S962 / S960) with superior tamper resistant characteristics. The IC chip has assurance levels of ISO/IEC 15408 ("Common Criteria for Security Evaluation"), EAL4+ for hardware, and EAL4 composite.

- **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. In addition, the card can be used for logical access control.

- **Better Data Rewrite Endurance**
  RC-S888,RC-S889 offers improved memory performance*1 (with a data rewrite endurance of 10 billion cycles), for high-frequency use.

**[RC-S889]**

- **Large Memory Capacity for Multi-Application**
  RC-S889 contains a 9KB IC chip (RC-S960) to support large memory application requirements*1. The card can store large amounts of data, suitable for biometric authentication, e-ticketing applications, and so on.

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*1. Compared to SONY RC-S860 series.
*2. Available only when the reader to be used accommodates the 424kbps transfer mode.
## PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Non-volatile memory</th>
<th>RC-S888</th>
<th>RC-S889</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size (Type)</td>
<td>4 Kbyte FRAM</td>
<td>9 Kbyte FRAM</td>
</tr>
<tr>
<td>User memory</td>
<td>2,464 bytes (16 bytes × 154 blocks)</td>
<td>6,400 bytes (16 bytes × 400 blocks)</td>
</tr>
<tr>
<td>Data retention period</td>
<td>10 years (at 70 °C)</td>
<td>10 years (at 70 °C)</td>
</tr>
<tr>
<td>Write endurance</td>
<td>10 billion times (at 55 °C)</td>
<td>1 billion times (at 55 °C)</td>
</tr>
</tbody>
</table>

### Communication distance

- 100 mm (when using RC-S462C, RS-S460C / S461C) *3
- 36 mm (when using RC-S406B)
- 30 mm (when using RC-S462B / S492B / S493B, RC-S460B / S461B / S490B/S491B)
- 5 mm (when using RC-S320 / S330)
- 3 mm (when using RC-S360)

### Communication method

- Conforms to ISO/IEC 18092 (212 kbps, 424 kbps Passive communication mode)

### Communication speed

- Supports automatic 212 kbps, 424 kbps switching *4

### Operating frequency

- 13.56 MHz

### Operating temperature/humidity

- 0 °C ~ 40 °C / 20 % RH ~ 90% RH
- 40 °C ~ 50 °C / 50 % RH or less

### Storage temperature/humidity

- -10 °C ~ +60 °C / 60 % RH or less

### Dimensions (H×W×D)

- 54.0×85.6×0.76 mm (Conforms to ISO/IEC 7810ID-1 type cards)

### Mass

- Approx. 5 g

### Basic material

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

### Security

- Embedded IC chip (RC-S962)

*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 radio frequencies and/or metal obstructions. In addition it is necessary for the reader antenna and RC-S888 / RC-S889 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 RC-S888 / RC-S889 has an IC chip with a security sensor. Use in a hot place or in the periphery 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 communication status prior to use.

*4 Available only when the reader to be used accommodates the 424 kbps transfer mode.

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

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### Typical System Layout

- **Computer(Controller)**
- **Reader/Writer**
- **Data reading**
- **Data writing**
- **Contactless IC card**
- **RF communication**

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- Other system names and product names described in this catalog are generally registered trademarks or trademarks belonging to their respective development manufacturers.

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