SONY

Contactless IC Card

FeliCa

RC-S888
RC-S889

The FeliCa™ contactless IC card system can be used 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.

Fast processing | High security | Multi-application

* Printing shown on card is only a sample

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.

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

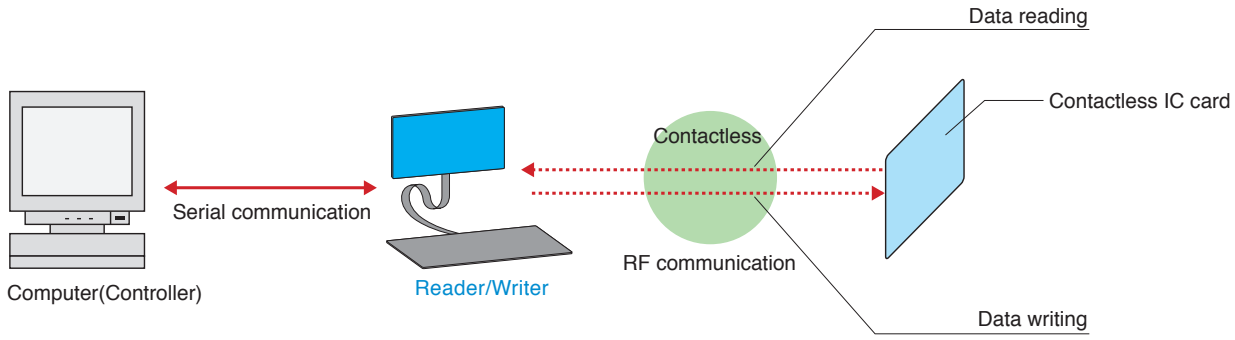
PRODUCT SPECIFICATIONS

		RC-S888	RC-S889
Communication distance[*1]		100 mm （when using RC-S462C, RS-S460C / S461C）[*3] 36 mm （when using RC-S400B） 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）	
Operating frequency		13.56 MHz	
Communication speed		Supports automatic 212 kbps, 424 kbps switching[*4]	
Operating temperature/humidity[*2]		0 ℃ ～ 40 ℃ / 20 % RH ～ 90% RH 40 ℃ ～ 50 ℃ / 50 % RH or less	
Storage temperature/humidity		−10 ℃ ～ +60 ℃ / 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.	
Non-volatile memory	**Size (Type)**	4 Kbyte FRAM	9 Kbyte FRAM
	User memory	2,464 bytes (16 bytes × 154 blocks)	6,400 bytes (16 bytes × 400 blocks)
	Data retention period	10 years (at 70 ℃)	
	Write endurance	10 billion times (at 55 ℃) *Continuous read = 1 billion times (at 55 ℃)	
Security		Embedded IC chip (RC-S962)	Embedded IC chip (RC-S960)
		・Hardware: ISO/IEC 15408 ("Common Criteria for Security Evaluation") EAL4+ ・Composite: ISO/IEC 15408 ("Common Criteria for Security Evaluation") EAL4	

*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/

TYPICAL SYSTEM LAYOUT



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