



* The image printed on this card is only a sample.

The RC-SA21 contactless IC chip provides backward compatibility with existing FeliCa™ Standard IC chip products (RC-SA01 series), while adding several new features.

* FeliCa Standard SD2 : The 2nd generation of the IC chips and their products of FeliCa Standard products which support AES encryption.

EAL6+
Common Criteria

Multi-
application

Extended Overlap Service /
Additional
security options

FEATURES

[Inherited features]

Highest level of security for contactless smartcard IC chips

The IC chip supports the AES encryption method and provides high security. With its state-of-the-art tamper-resistant technology, it has acquired the very high assurance level of EAL6+, in accordance with ISO/IEC 15408 Common Criteria certification, an international standard for security. The IC chip also complies with Public Transportation IC Card Protection Profile (PTPP).

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 chips.

Communication with NFC Forum-compatible readers

The chip complies with Type 3 Tag functionality defined by the NFC Forum. Therefore, a card with the chip can communicate with NFC-compatible smartphones and readers.

[New features]

Additional security options to meet market needs

In addition to the encryption and integrity protection of communication data in the current secure communication function, a security option that supports only integrity protection of communication data has been added. This extends the choice of cost-balanced system solutions for use cases where higher priority is given to high-speed transactions, while meeting the required security needs.

Extended Overlap Service

This feature allows different service providers to share additional services, while making the most of existing systems.

Value-Limited Purse Service

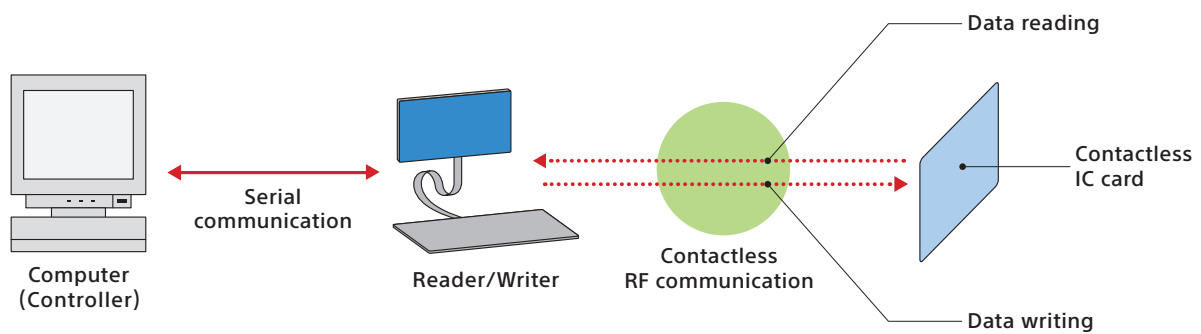
Value-Limited Purse Service enables the purse data to be set as a negative numerical value, and enables "Upper Limit Value" and "Lower Limit Value" to be specified.

PRODUCT SPECIFICATIONS

		RC-SA21
Communication method		Conforms to ISO/IEC 18092 (212 kbps or 424 kbps Passive communication mode)
Operating frequency		13.56 MHz
Communication speed		212 kbps and 424 kbps automatically switchable
Supported encryption		AES encryption AES-MAC authentication
Supported commands		AES-encrypted commands Communication-with-MAC commands Non-encrypted commands
Non-volatile memory	Size	4 Kbytes
	User memory	160 blocks (1 block = 16 bytes)
	Data retention period	50 years (25 °C), 10 years (85 °C)
	Access endurance	10 ¹³ times (25 °C), 10 ¹³ times (85 °C)
Operating temperature		-25 °C to +100 °C (Quality and reliability are assured when the operating temperature is within the range of -25 °C to +85 °C.)
Storage temperature		-55 °C to +125 °C

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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