

The RC-S732 product is a compact antenna module equipped with a FeliCa™ Link IC Chip compliant with the NFC Forum Type 3 Tag. The RC-S732/P01 product is a compact antenna board optimized for the FeliCa Link IC Chip.

With the multi-layered spiral structure antenna, these products satisfy the analog characteristics specified by the NFC Forum while maintaining a compact size, thus making them ideal for installation in consumer electronic digital devices.

Compact and energy-saving

Compliant with international standards

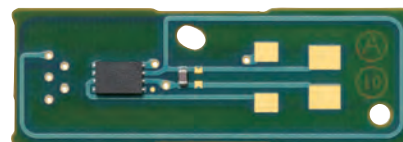
Magnetic field detection

RC-S732

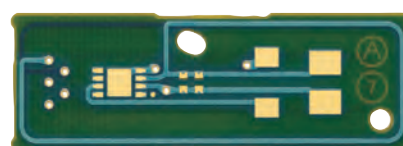
Compact Antenna Module

RC-S732/P01

Compact Antenna Board



RC-S732



RC-S732/P01

FEATURES

▪ Compact and energy-saving design

The FeliCa Link IC Chip (RC-S967) included with the RC-S732 module is a custom IC chip that consumes roughly half the power of similar conventional products. It can operate even in weak magnetic fields in the Lite-S Mode*¹. The RC-S732/P01 product is a compact antenna that is designed to connect, with wires, the main unit circuit board in which a FeliCa Link IC Chip*² is embedded and the antenna terminal (L1/L2 Pad) of the RC-S732/P01 product. Furthermore, the RC-S732 and RC-S732/P01 products adopt the multi-layered spiral structure antenna to achieve the smallest size among similar products having the same communication performance.

▪ Compliance with international standards

The RC-S732 and RC-S732/P01 products are compliant with the NFC Forum Type 3 Tag, enabling communication with NFC smartphones. They have enough communication performance*³ to be compatible with devices that incorporate any of the three reference antenna types (P0, P3, and P6 size) defined in the NFC Forum 2nd Certification Wave. Therefore, they ensure good communication compatibility with products such as NFC smartphones, which have various forms of product-specific antenna. They also reduce the evaluation workload for communication performance.

▪ Magnetic field detection function

By connecting the L1/L2 Pad on the RC-S732 module to an external rectifier circuit, it is possible to detect the voltage induced in the antenna coil (this function is compatible with RC-S711). This also enables the detection of a magnetic field by means of a digital signal from the RFDET*⁴/GND Pad, making it possible to reduce the cost by omitting a rectifier circuit.

▪ Easy installation and optimization

The RC-S732/P01 product is a printed circuit board that can be used as a thin antenna, which increases the flexibility regarding antenna position inside the device in which it is embedded. Furthermore, by altering the resistance for load modulation in the FeliCa Link IC Chip, it is possible to adjust the communication characteristics that change according to the environment of the device in which the module is installed.

*1. Operates only in Lite-S Mode.

*2. By connecting the FeliCa Link IC Chip with the host microcontroller via the I²C interface, NFC smartphone can handle the data dynamically in memory at the host microcontroller's side via the wireless communication. (When using the following three modes: Lite-S HT <Lite-S Host Through Mode>, Plug, and NFC-DEP.)

*3. In an ideal environment without interference from peripheral radio frequencies and/or metal obstructions.

*4. With the RFDET Pin pulled up to the external power source.

PRODUCT SPECIFICATIONS

		RC-S732 Compact Antenna Module	RC-S732/P01*1 Compact Antenna Board
Wireless section	Communication method	Conforms to ISO/IEC 18092 (212 kbps, 424 kbps Passive communication mode)	
	Operating frequency	13.56 MHz	
	Communication speed	212 kbps / 424 kbps	
External connection Pad	L1 / L2 Pad	Use as magnetic field detection terminals (analog signal)	Use as antenna terminal
	RFDET / GND Pad	Use as magnetic field detection terminals (digital signal)	---
Communication distance*2		10 mm (when using RC-S330 / RC-S380)	Depends on operating environment including wire materials connected to the antenna, their length, impedance, etc.
Operating temperature / humidity range (under conditions without dew condensation)		-20 °C to +75 °C -20 °C to +40 °C : 90% RH or less, 40 °C to 75 °C : 50% RH or less	
Storage temperature / humidity range (under conditions without dew condensation)		-40 °C to +80 °C -40 °C to +40 °C : 90% RH or less, 40 °C to 80 °C : 60% RH or less	
External dimensions (W x H x D)		25.9 mm x 1.3 mm x 9 mm	25.9 mm x 0.6 mm x 9 mm
Operation mode		Lite-S	Lite-S / Lite-S HT / Plug / NFC-DEP

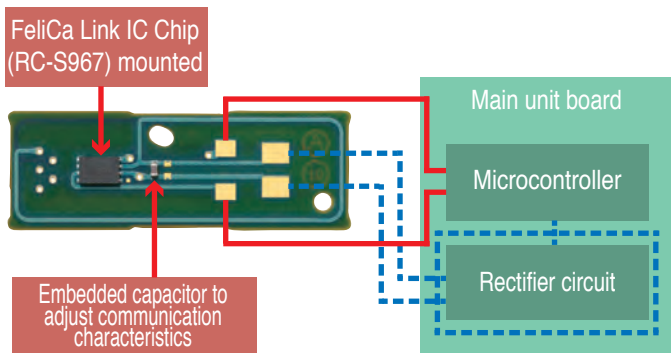
*1. When used together with the FeliCa Link IC Chip (RC-S967).

*2. Communication distance depends on the peripheral environment. Under ideal conditions, this value is not affected by electromagnetic waves or metallic substances.

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

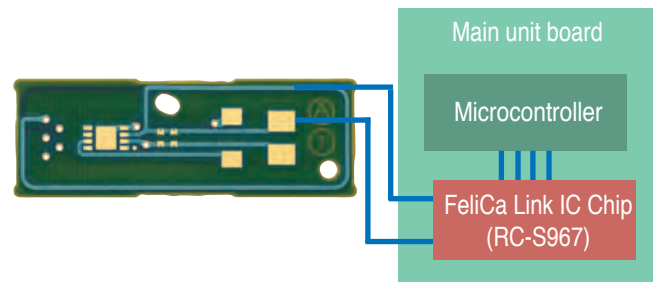
CONNECTION EXAMPLES

RC-S732: Connection as a single module



- Possible to use magnetic field detection function (responds to digital and analog signals). (The rectifier circuit is not necessary when using digital signals.)
- Not possible to use I²C communication function.

RC-S732/P01: Connection as a separate type antenna



- Possible to use all functionality of the FeliCa Link IC Chip (RC-S967), such as I²C communication, RF-DET magnetic field detection function, etc..

· Specifications and external appearance are subject to change without prior notice.

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· FeliCa is a contactless IC card technology developed by Sony Corporation.

· 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.

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