

Contactless IC Chip

### RC-S967/1V

Contactless IC Chip

### RC-S967/2V

NFC Module with I<sup>2</sup>C Interface

### RC-S730

FeliCa™ Link inherits the functionality of FeliCa Plug and FeliCa Lite-S. In addition, it supports reader/writer functionality as well as NFC-DEP function. IC chip RC-S967/1V provides NFC Tag functionality. IC chip RC-S967/2V supports reader/writer functionality, in addition to functions provided by RC-S967/1V. RC-S730 is an NFC module with I<sup>2</sup>C interface, based on the RC-S967/1V IC chip.

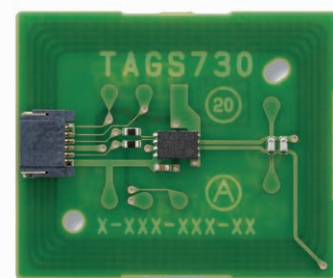
Wide range of functions and operational modes

Power-saving

Conforms to international standards



RC-S967/1V  
RC-S967/2V



RC-S730

## FEATURES

### Various functions and mode of operation

Thanks to the NFC-F function for Near Field Communication and an I<sup>2</sup>C (Inter-Integrated Circuit) bus for wired communication, data exchange is possible between smartphones equipped with NFC and the controller (Host CPU) of a device incorporating this product. The five modes (Lite-S, Lite-S HT\*<sup>1</sup>, Plug, NFC-DEP, and Reader/Writer\*<sup>2</sup>) enable a variety of applications to be used.

Mutual authentication functionality using MAC (Message Authentication Code) is also implemented.

\*<sup>1</sup> Lite-S HT stands for Lite-S Host Through mode.

\*<sup>2</sup> Operates only with RC-S967/2V. In addition to this product, a carrier-wave generating circuit and antenna are required.

### Power-saving

A maximum 0.5 mA current supply is consumed during operation, which drops to only 0.1 μA during standby, making the product suitable for installation in battery-operated electronic devices. To save battery power, the functionality that detects the magnetic field and commands from the reader can be used to control the power-saving mode.

### Conforms to international standards

The product Conforms to NFC Type 3 Tag as defined by the NFC Forum, supporting P2P communication (NFC-DEP)\*<sup>3</sup>, therefore it enables communication with NFC smartphones and other NFC devices. In addition, the NFC module with I<sup>2</sup>C interface (RC-S730) can communicate with devices that incorporate any of the three reference antenna types (P0, P3, and P6 size) of the NFC Forum's 2nd Wave Certification\*<sup>4</sup>.

\*<sup>3</sup> On the controller side of the device in which this product has been incorporated, NFC-DEP, LLCP, and SNEP protocol stacks must be implemented, as defined by the NFC Forum.

\*<sup>4</sup> The communication performance is promised on the ideal environment without the effects of peripheral radio frequencies and/or metal obstructions.

## PRODUCT SPECIFICATIONS

		RC-S967/1V	RC-S967/2V
Wireless	Communication method	Conforms to ISO/IEC 18092 (212 kbps, 424 kbps Passive communication mode)	
	Operating frequency	13.56 MHz	
	Data transfer speed	212 kbps / 424 kbps	
Wired	Communication interface	I <sup>2</sup> C	
	Data transfer speed	400 kbps or less	
User memory		14 Blocks (1 block = 16 bytes)	
Operating temperature (under conditions without dew condensation)		-25 °C to +85 °C	
Storage temperature / humidity (under conditions without dew condensation)		-55 °C to +125 °C	
Operating voltage		1.8 V to 3.7 V	
Consumption current (25 °C)		Operation : 0.5 mA or less, Power saving mode: 0.1 μA or less	
Packaging size		SON8	
External dimensions		2.0 mm × 3.0 mm × 0.75 mm	
Packaging type		Tape & Reel	
Mounting method		Reflow soldering	
Operation mode		Lite-S / Lite-S HT / Plug / NFC-DEP	Lite-S / Lite-S HT / Plug / NFC-DEP / Reader/Writer

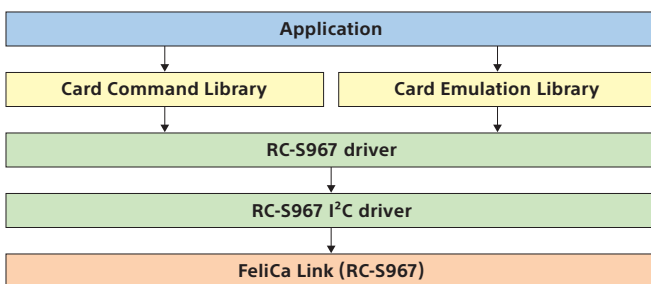
		RC-S730
Communication distance *1		10 mm (RC-S330 / RC-S380)
Operating temperature/humidity (under conditions without dew or freeze condensation)		-10 °C to +70 °C -10 °C to +40 °C : 90%RH or less, 40 °C to 70 °C : 50%RH or less
Storage temperature / humidity (under conditions without dew or freeze condensation)		-40 °C to +80 °C -40 °C to +40 °C : 90%RH or less, 40 °C to 80 °C : 60%RH or less
Operating voltage		1.8 V to 3.7 V
Current consumption (25 °C)		Operation: 0.5 mA or less (no load) Power saving mode : 0.1 μA or less
Connector		FPC/FFC connector, bottom contact, 6 contacts, pitch: 0.5 mm FPC/FFC thickness : 0.3 mm
External dimensions		20 mm × 24 mm × 1.89 mm
Operation mode		Lite-S / Lite-S HT / Plug / NFC-DEP

\*1 The communication distance depends on the peripheral environment. Under ideal conditions, this value is unaffected 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/](http://sony.net/Products/felica/business/tech-support/)

## FeliCa LINK SDK

The SDK for the embedded software to control FeliCa Link



### Source Code Distribution

Sony provides the C-language source code. By using this code, you can add, delete, and optimize functions. This enables CPU-independent and OS-independent design.

### Operation Check Environments

Operating system	Compilation environment
Linux (Ubuntu 12.04)	GNU Make + gcc
Windows 7 SP1	Microsoft Visual Studio 2008 SP1

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