

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 I²C interface, based on the RC-S967/1V IC chip.

RC-S967/1V

IC Chip

RC-S967/2V

IC Chip

RC-S730

NFC Module with I²C Interface

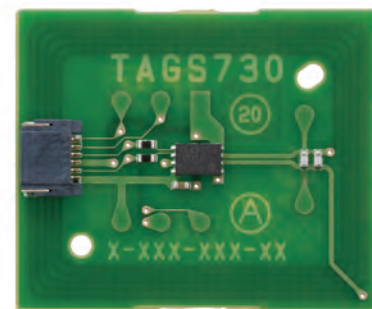
Wide range of functions and operational modes

Power-saving

Compliance with 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 I²C (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*¹, Plug, NFC-DEP, and Reader/Writer*²) enable a variety of applications to be used.

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

• 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.

• Compliance with international standards

The product is compliant with NFC Type 3 Tag as defined by the NFC Forum, supporting P2P communication (NFC-DEP)*³, therefore it enables communication with NFC smartphones and other NFC devices.

In addition, the NFC module with I²C 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*⁴.

*1 Lite-S Host Through Mode.

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

*3 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.

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

PRODUCT SPECIFICATIONS

FeliCa Link IC Chip

		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 ² C	
	Data transfer speed	400 kbps or less	
User memory		14 Blocks*	
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 x 3.0 mm x 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

* 1 block is 16 bytes.

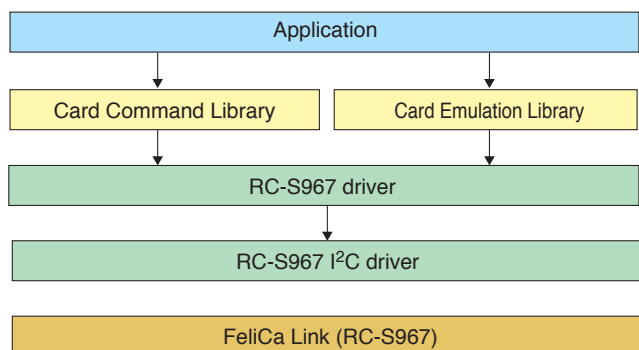
FeliCa Link Module

		RC-S730
Communication distance*		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
Consumption current (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: 0.5mm FPC/FFC thickness: 0.3mm
External dimensions		20 mm x 24 mm x 1.89 mm
Operation mode		Lite-S / Lite-S HT / Plug / NFC-DEP

* The communication distance depends on the peripheral environment. Under ideal conditions, this value is unaffected by electromagnetic waves or metallic substances.

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 Environment

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

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 Note that ™ and ® symbols are intentionally omitted from the rest of this document.

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April, 2017
E2014-01-01