SONY

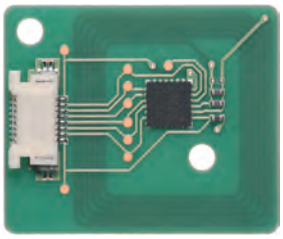
NFC Dynamic Tag (FeliCa Plug)

FeliCa

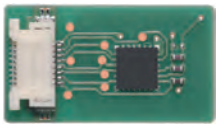
RC-S801
RC-S802
RC-S926

The NFC Dynamic Tag is a wireless module with a cable interface to enable data transmission between NFC reader (Android smartphone, NFC port, PaSoRi, etc.) and other electronic equipment or gadgets.

Low current consumption | Cable and wireless interface | Magnetic field detection function | Emulator



* RC-S801 module



* RC-S802 module

FEATURES

- **Cable and wireless interface**

  A cable interface uses our own triple-line half-duplex communication and can be controlled even with a low-speed host CPU.
  For development of applications on the reader side, it is possible to use existing products, such as SDK for NFC, which are able to access the wireless interface of the NFC Dynamic Tag.

  * For any application development the customer is required to follow the specifications on the cable side require development by the client based on specifications sheets.
  * We are not planning to offer an interface library control library.

- **Low current consumption**

  The current consumption during operation is less than 1mA and during standby is kept at 0.1 μA or less to provide power supply conditions suitable for a battery-operated device.

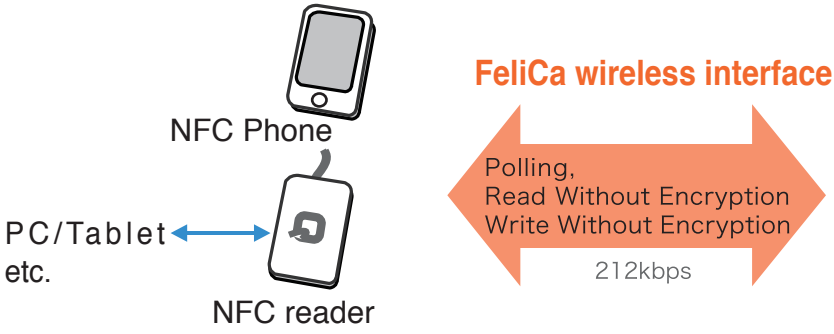
- **Magnetic field detection function**

  The NFC Dynamic Tag includes a function by which the magnetic field generated by the reader can be detected and the host CPU informed.

- **Emulation of NFC forum Type 3 Tag**

  The NFC Dynamic Tag can emulate an NFC Type 3 Tag if the data from the host CPU in response to any commands sent by the reader follows the specifications of the NFC Forum. The emulated device can communicate with any reader, conforming to the specifications of the NFC Forum.

TYPICAL SYSTEM LAYOUT



* This product does not have a nonvolatile memory. If the power is cut, the internal data is lost. Unlike a FeliCa card there is no function to constantly store data.
* The 212 kbps is the modulation speed of the RF interface.
* The effective speed of data transmission is dependent on the processing capacity of the controller of the cable interface and the wireless interface system.
* After integrating into any (customer) device or gadget, be sure to confirm the communications characteristics of the device with which the NFC Dynamic Tag should respond.

PRODUCT SPECIFICATIONS

· **NFC Dynamic Tag (FeliCa Plug) chip**

		RC-S926
Wireless section	**Communications method**	Conforms to ISO/IEC 18092（212 kbps Passive communication mode）*1
	Operational frequency	13.56 MHz
	Communication speed	212 kbps
Cable section	**Communication method**	Triple-wire half-duplex serial interface (Sony's specification)
	Communication speed	Dependent on data processing speed of Host CPU (Max. 1 Mbps)
Operating temperature		-25 °C to +40 °C
Storage temperature		-40 °C to +125 °C*2
Consumption current (25℃)		Operation mode: 1 mA or less (no load) Standby mode: (RF non-detection): 0.1μA or less
Package		VQON24
External dimensions (W×H×D)		3.8 mm × 3.8 mm × 0.55 mm (Max.)
Packaging type		Tape & reel
Mounting method		Reflow soldering

*1 Depends on Host CPU.
*2 Storage temperature of the IC chip in its standalone form.

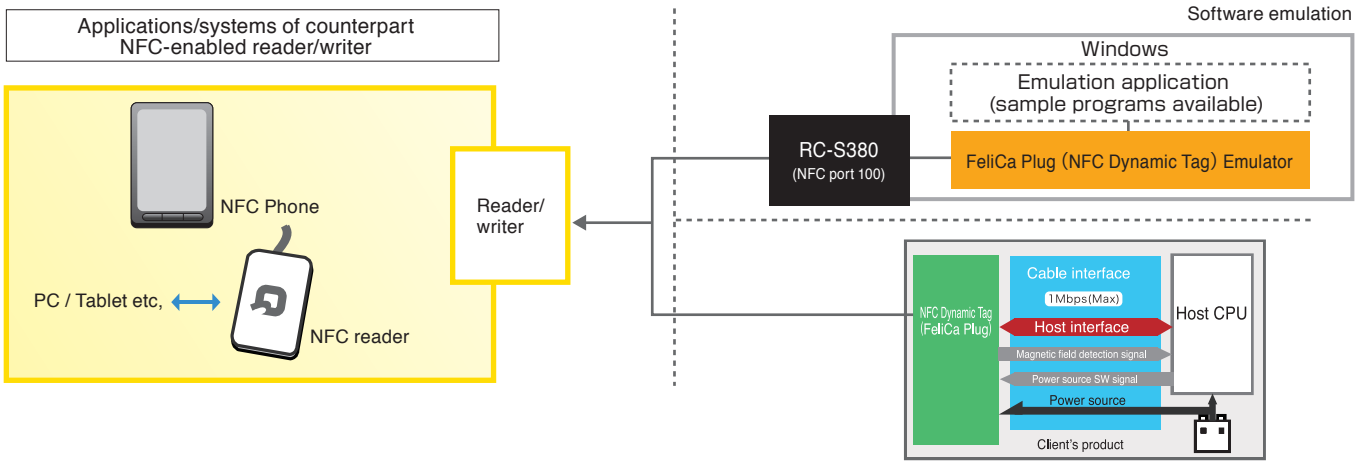
· **NFC Dynamic Tag (FeliCa Plug) module**

		RC-S801	RC-S802
Communication distance *1		10 mm (when using RC-S320 / S330)	10 mm (when using RC-S320 / S330)*2
Wireless section	**communication method**	Conforms to ISO/IEC 18092（212 kbps Passive communication mode）	
	Operational frequency	13.56 MHz	
	Communication speed	212 kbps	
Cable section	**Communication method**	Triple-wire half-duplex serial interface (Sony's specification)	
	Communication speed	Dependent on data processing speed of Host CPU (Max. 1 Mbps)	
Usage temperature/humidity		0 °C to 40 °C / 20% RH to 90% RH 40 °C to 50 °C / 50% RH or less	
External dimensions (W×H×D)		24 mm × 20 mm × 2.95 mm	19.5 mm × 11 mm × 2.95 mm
Mass		Approx. 0.73 g	Approx. 0.45 g
Operating voltage		1.8 V to 3.7 V	
Consumption current (25°C)		Operation mode: 1 mA or less (no load) Standby mode: (RF non-detection): 0.1μA or less	
Connector		FPC/FFC 8-pole bottom connection type, pitch: 0.5 mm Applicable FPC/FFC thickness: 0.3 mm	

*1 The communications distance varies according to the usage environment where the device is used. These are values in an ideal environment with no influence from any external electrical waves or metal. They are performance values with the reader/writer antenna and RC-S801 / S802 in a horizontal state and with the respective center points located on the same line.
*2 Compared to the RC-S801, the communication area is limited.

NFC Dynamic Tag (FeliCa Plug) Emulator

The NFC Dynamic Tag (FeliCa Plug) emulator is a DLL that uses the card emulation function of a reader/writer compatible with the NFC Port 100 USB on the RC-S380, etc. to enable use in a Windows environment having a communications function corresponding to FeliCa Plug in communicating with an NFC-enabled reader/writer. This DLL can be used to carry out software emulation of the host CPU of electronic equipment equipped with a FeliCa Plug.
Use is envisaged in prototype development of electronic deices equipped with the FeliCa Plug or development of counterpart NFC-enabled reader/writer applications/systems.



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