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.

**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.

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*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

<table>
<thead>
<tr>
<th></th>
<th>RC-S967/1V</th>
<th>RC-S967/2V</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication method</strong></td>
<td>Conforms to ISO/IEC 18092 (212 kbps, 424 kbps Passive communication mode)</td>
<td></td>
</tr>
<tr>
<td><strong>Operating frequency</strong></td>
<td>13.56 MHz</td>
<td></td>
</tr>
<tr>
<td><strong>Data transfer speed</strong></td>
<td>212 kbps / 424 kbps</td>
<td></td>
</tr>
<tr>
<td><strong>Wired</strong> Communication interface</td>
<td>I²C</td>
<td></td>
</tr>
<tr>
<td><strong>Data transfer speed</strong></td>
<td>400 kbps or less</td>
<td></td>
</tr>
</tbody>
</table>

**User memory**
- 14 Blocks

**Operating temperature**
-25 °C to +85 °C

**Storage temperature / humidity**
-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

<table>
<thead>
<tr>
<th></th>
<th>RC-S730</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication distance</strong></td>
<td>10 mm (RC-S330 / RC-S380)</td>
</tr>
</tbody>
</table>
| **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                                                 |

* 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**

  - **Application**
    - Card Command Library
    - Card Emulation Library
  - RC-S967 driver
  - RC-S967 I²C driver
  - FeliCa Link (RC-S967)

- **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**

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Compilation environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linux(Ubuntu 12.04)</td>
<td>GNU Make + gcc</td>
</tr>
<tr>
<td>Windows 7 SP1</td>
<td>Microsoft Visual Studio 2008 SP1</td>
</tr>
</tbody>
</table>

Specifications and external appearance are subject to change without prior notice for the purpose of improvement.

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

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