SONY

Embedded NFC Reader Module

RC-S632 and RC-S634 are Embedded NFC modules for PC, tablet and other consumer electronic devices. These modules are registered by the NFC Forum Certification Program and support the communication with ISO/IEC 14443 Type A / Type B and FeliCa™.

FEATURES

- **Optimized for PC, tablet, and consumer electronic devices**
The RC-S632 module is suitable for incorporating into any laptop PC. The RC-S634 module has a Flexible Printed Circuit (FPC) antenna, which can easily be embedded into any tablet device.

- **NFC Forum-certified**
Can communicate with any device conforming to the NFC Forum specifications.

- **Available for various contactless IC cards**
Read/Write capability with FeliCa cards, FeliCa-compatible devices, and ISO/IEC 14443 Type A / Type B cards.

- **Conforms to PC/SC 2.0 specification**
A PC/SC API is provided to access FeliCa cards and ISO/IEC 14443 Type A / Type B cards.

APPLICATIONS

- Logical access control
- ID authentication
- Online payment
- Loyalty service
- P2P communication

APPLICATION DEVELOPMENT ENVIRONMENTS

- "SDK for NFC Lite" for Windows OS
  Supports applications for ISO/IEC14443 Type A / Type B cards, as well as FeliCa cards, FeliCa-compatible devices and Mobile Wallet Phones (Osaifu-Keitai).

- "SDK for NFC <Reference Implementation>" for embedded devices
  For other widely-adopted operating systems, such as Linux, reference source code written in C language (for easy porting) is provided to develop applications for ISO/IEC14443 Type A / Type B cards, as well as FeliCa cards, FeliCa-compatible devices and Mobile Wallet Phones.
## PRODUCT SPECIFICATIONS

For more details of specifications, see the "Product Specifications" documents.

### Regulation requirements
- Japan: Radio law format specification number: AC-12036
- Japan: Radio law format specification number: AC-12034

<table>
<thead>
<tr>
<th>Regulation requirements(^{1})</th>
<th>RC-S632</th>
<th>RC-S634</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication distance (per card and device)(^{2})</td>
<td>Approx. 25 mm</td>
<td>Approx. 25 mm</td>
</tr>
<tr>
<td>Communication speed (per card and device)</td>
<td>106 kbps, 212 kbps, 424 kbps</td>
<td>-</td>
</tr>
<tr>
<td>API</td>
<td>PC/SC Version 2.0, Near Field Proximity API, FeliCa library</td>
<td>-</td>
</tr>
<tr>
<td><strong>Compatible cards</strong></td>
<td>- FeliCa Standard - FeliCa Lite - FeliCa Lite-S - FeliCa Link - NFC Dynamic Tag (FeliCa Plug) - Mobile FeliCa IC mobile phone - Pico Pass - MIFARE Classic - MIFARE Ultralight / Ultralight C - MIFARE DESFire / DESFire EV1 - MIFARE Plus - Topaz / JEWEL - ISO/IEC 14443 Type A / Type B - ISO/IEC 14443-4 Type A / Type B (T=CL) - NFC Forum Type 1, 2, 3, 4A, 4B Tag</td>
<td></td>
</tr>
<tr>
<td>Carrier frequency (per card and device)</td>
<td>13.56 MHz (±50 ppm)</td>
<td>-</td>
</tr>
<tr>
<td>Operating temperature / humidity (no condensation)(^{3})</td>
<td>-10 °C to 40 °C / 20% to 90% RH, 40 °C to 60 °C / 50% RH or lower</td>
<td>-20 °C to +70 °C / 60% RH or lower</td>
</tr>
<tr>
<td>Storage temperature / humidity (no condensation)</td>
<td>-20 °C to +70 °C / 60% RH or lower</td>
<td>-</td>
</tr>
<tr>
<td>Mass</td>
<td>Approx. 9.8 g</td>
<td>Approx. 4.5 g (Drive board 1.7 g, Antenna 2.8 g)</td>
</tr>
<tr>
<td>External dimensions (W x H x D)</td>
<td>Approx. 50 mm x 2.7 mm x 40 mm</td>
<td>Drive board: approx. 44 mm x 2.5 mm x 12 mm, Antenna: approx. 58 mm x 5.5 mm x 38 mm</td>
</tr>
<tr>
<td>External interface</td>
<td>USB 2.0 (full-speed)</td>
<td>-</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>DC 5 V (supplied via USB)</td>
<td>-</td>
</tr>
<tr>
<td>Consumption current</td>
<td>Max. 140 mA</td>
<td>Max. 160 mA</td>
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</table>

\(^{1}\) For details of other regulatory compliance, please contact us directly, using the details at the foot of this page.

\(^{2}\) The communication distance depends on the operating environment. Under ideal conditions, this value is unaffected by electromagnetic waves or metallic substances.

\(^{3}\) Function assurance temperature.

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**Note 1:** Conforming to the RoHS Directive (a European environmental regulation), a halogen-type flame retardant is not used for the printed circuit board. Also, lead-free solder is used and the design is environmentally-friendly.

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

- FeliCa is a trademark of Sony Corporation.
- 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 TM and ® symbols are sometimes purposely omitted from this text.

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