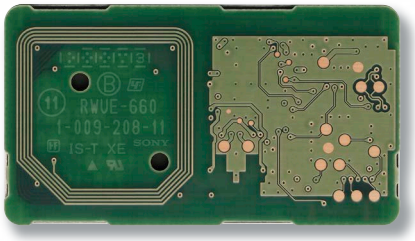
SONY

Embedded NFC Reader Module

UART Interface

RC-S660/S



RC-S660/S is a UART-compatible NFC module suitable for incorporating into various embedded devices. This module supports communication with ISO/IEC 14443 Type A / Type B and ISO/IEC 15693 cards and tags, as well as FeliCa™. In addition, as with previous products, the antenna and control have been integrated to maintain a compact size, making it easier to incorporate into a variety of devices.

Embedded NFC Reader

High-speed Communication

FEATURES

Reader module suitable for incorporating into various embedded devices

This product achieves better communication performance and requires approximately 60% less space compared with the conventional product [1)], making it possible to incorporate the module into a wider range of devices.

1) Comparison with RC-S620/S

Available for various contactless IC cards

The module is read/write compatible with FeliCa cards, FeliCa-compatible devices, ISO/IEC 14443 Type A / Type B and ISO/IEC 15693 cards and tags.

High-speed communication

In addition to 424 kbps high-speed communication with FeliCa, equivalent to the conventional product [2)], 848 kbps high-speed communication using ISO/IEC 14443 Type A / Type B is available.

2) RC-S620/S

APPLICATIONS

· Logical access control · Online payment · ID authentication · Loyalty service

APPLICATION DEVELOPMENT ENVIRONMENTS

SDK for NFC <Reference Implementation> for embedded systems (optional)

For other widely-adopted operating systems, such as Linux, reference source code with transplantable C language is provided to develop applications for ISO/IEC 14443 Type A / Type B and ISO/IEC 15693 cards and tags, as well as FeliCa cards and FeliCa-compatible devices.

• Card Command Library is API-compatible with applications for RC-S620, RC-S632, RC-S634.

FeliCa

PRODUCT SPECIFICATIONS

	RC-S660/S
Regulation requirements	Japan: Radio law format specification number: AC-22045 USA: FCC-ID: AK8RCS660S Canada: IC: 409B-RCS660S EU: EN 300 330 ＊For details of other regulatory compliance, please contact us directly.
Communication method	Conforms to ISO/IEC 18092 (212 kbps / 424 kbps Passive communication mode) Conforms to ISO/IEC 14443 Type A / Type B Conforms to ISO/IEC 15693
Communication distance [1)] **(per card and device)**	Approx. 25 mm
Carrier frequency (per card and device)	13.56 MHz
Communication speed (per card and device)	FeliCa: 212 kbps, 424 kbps ISO/IEC 14443: 106 kbps, 212 kbps, 424 kbps, 848 kbps ISO/IEC 15693: 26 kbps
Compatible cards / devices	FeliCa ISO/IEC 14443 Type A / Type B ISO/IEC 15693
API	Card Command Library (Basic Suite)
External interface	UART 9.6 kbps ~ 460.8 kbps (115.2 kbps at power-on, speed can be changed by command)
Operating temperature / humidity [2)] **(no condensation)**	-10°C to +40°C / 20%RH to 90%RH, 40°C to 60°C / 50%RH or lower
Storage temperature / humidity (no condensation)	-20°C to +70°C / 60%RH or lower
Mass	Approx. 4 g
External dimensions (W x H x D)	Approx. 45 mm × 2.3 mm × 25 mm
Operating voltage	DC 3.3 V
Consumption current	Max. 140 mA during operation

1) Communication distance varies depending on the operating environment and the card used. These values apply in an ideal environment without radio waves and metals in the vicinity.
2) Function assurance temperature.

＊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.

Verified cards / devices [3)]

FeliCa cards / devices
・FeliCa Standard, FeliCa Lite-S, FeliCa Link, FeliCa Plug/NFC Dynamic Tag

MIFARE sample cards
・MIFARE Classic, MIFARE Ultralight, MIFARE DESFire, MIFARE Plus

Mobile phones with Mobile FeliCa OS ("Osaifu-Keitai")

NFC Forum Type 2 / 3 / 4A / 4B / 5 Tag

3) Operation has been verified in our environment, and operation is not guaranteed in all environments and conditions.

Sony Corporation
Secure Technology & Solutions Business Unit

Sony City Osaki 2-10-1 Osaki Shinagawa-ku, Tokyo, 141-8610 Japan

FeliCa website sony.net/felica/

October, 2023
E2022-02-02