
SONY
FeliCa
Just tap for an easier life
SONY
FeliCa

More "Contactless" Convenience

We began developing contactless IC chips in the latter half of the 1980s, since then we have continued to invest in the technology to provide even greater convenience, security and value-add to public infrastructure, including e-tickets for transportation and e-money for payment. As a leading company, Sony endeavors to develop new markets through NFC-based products. Sony will continue to create even more "contactless" convenience.

Common Criteria

The World’s First contactless IC card chip to acquire EAL6+[1)]

1): EAL6+ Certification of Common Criteria (ISO/IEC 15408), the International Standard for IT Security. See RC-SA01 product information.

Features

Fast transactions

Transactions with compatible readers are fast (about 0.1 sec.) thanks to the FeliCa IC chip. Contactless communication means there's no need to remove the card from a wallet or purse.

High security

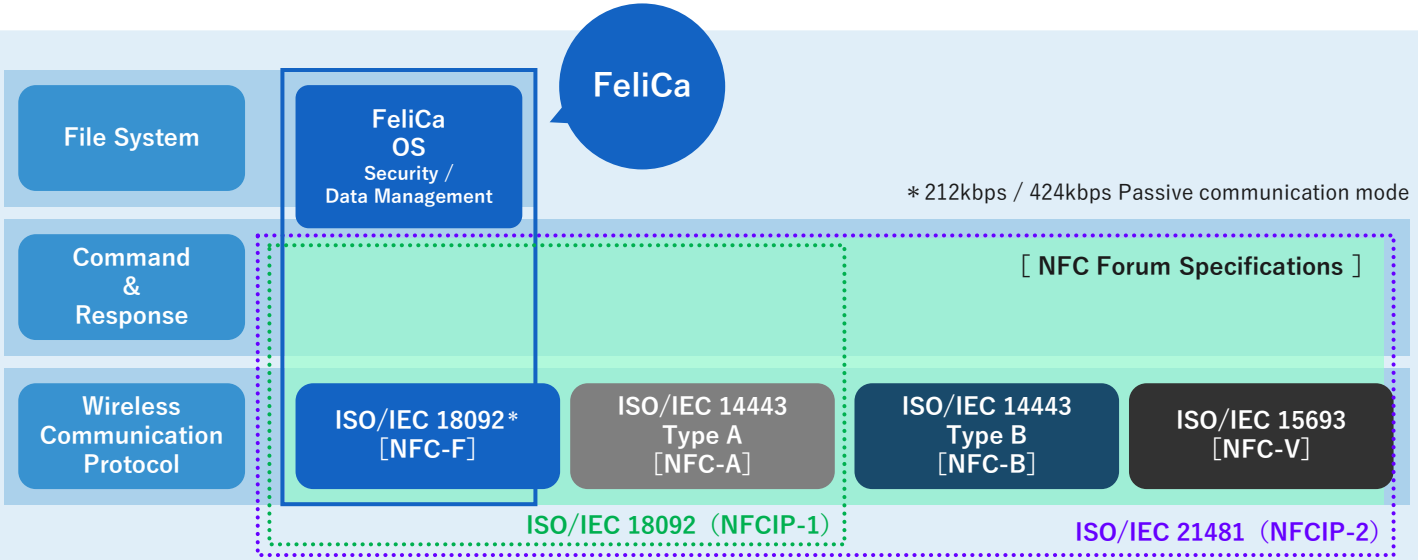
Transmission between FeliCa cards, readers and controllers is encrypted. What's more, a new encryption key is generated for each transaction, protecting users from security risks.

Many possibilities

Data for a range of applications can be managed in files and folders on a FeliCa card. Potential services include e-tickets, e-money, loyalty point services and many other applications.

ISO/IEC 18092 and FeliCa

The communication system for FeliCa contactless technology conforms to ISO/IEC 18092 (NFCIP-1), the standard jointly proposed by Sony and NXP Semiconductors. NFC technical specifications were decided by the NFC Forum based on international standards set by ISO/IEC and support ISO/IEC 14443, ISO/IEC 18092, and ISO/IEC 15693. FeliCa is one standard within the NFC framework.



Transport

IC card tickets throughout Asia Pacific

Recognized for their high level of security, FeliCa IC card tickets have been introduced by public transportation operators throughout Asia Pacific region.

Hong Kong: Octopus Card & Mobile

Introduced in Hong Kong in 1997, the FeliCa- based Octopus card was one of the world's first IC card transit tickets. Since 2013, Octopus has been offering a mobile service.

India: Chennai Metro Travel Card

FeliCa has been adopted as an IC transit ticket by Chennai Metro, which was constructed in India to ease traffic congestion in the city of Chennai.

Indonesia: KCI Transit Ticket

PT.KERETA COMMUTER INDONESIA (KCI) , a leading rail operator in Indonesia, has adopted FeliCa technology for its IC ticket operation. KCI has launched contactless prepaid card tickets as well as FeliCa embedded wristbands.

Vietnam: ETC Card

FeliCa has been adopted as an ETC smart card for the automated expressway toll collection system that connects the cities of Ho Chi Minh and Dau Giay.

Sri Lanka: Combination Bank card & IC Transport Ticket

FeliCa has been adopted for bank cards that can also be used for public transportation.

Hatton National Bank "HNB One"

Bangladesh: Rapid Pass Card

Bangladesh has introduced a FeliCa transit card in the fare collection system for the state-run bus company and several private bus companies.

IC card transit tickets / interoperable services throughout Japan

FeliCa IC cards are used as tickets for public transportation throughout Japan. Since spring 2013, 10 different types of IC transit cards have become interoperable throughout Japan. More transport systems can now accept more operators' cards than ever before. IC card tickets can also be used as e-money at a growing number of stores.

e-payment

FeliCa is used in various prepaid/postpaid e-money services. These services can also be incorporated in mobile phones (Osaifu-Keitai).

Adopted in various mobile contactless services

"Mobile Wallet" services in Japan have been in use since 2004, thanks to Mobile FeliCa technology. Apple Pay ® and Google Pay™ began to support FeliCa in 2016. We will continue to promote Mobile FeliCa as a global mobile platform, based on international standards, and make use of this platform for all types of contactless services.

おサイフケータイ®　Pay　G Pay

The flexibility of FeliCa

In addition to card format, FeliCa technology can be used in a variety of form factors, such as mobile phone and coin-type tokens. FeliCa can also be incorporated into wristwatches or key fobs.

QUICPay™ coin and Wristband

ANA QUICPay+nanacotailplane-shaped key fob

Rakuten Edy key fob

ID, Access Control, Membership

JAL Touch & Go Service

Touch & Go Service by Japan Airlines enables passengers to pass through boarding gates simply by tapping their mobile wallet phone or JAL IC card to the reader. Earned mileage points can be converted to e-money.

ID cards for students, faculty, and employees

FCF, a shared usage format of FeliCa for ID cards, has been introduced in Japan at 360 universities and other educational institutions, as well as 120 companies and local governments.

A total of 144 companies have joined the FCF Promotion Forum launched in 2004, and each company is providing diverse services. They began offering a new format in 2013, making FeliCa usable on even more systems.

FCF UN Campus　FCF　FCF UN

e-Application, Logical Access

NFC reader supporting various IC Cards

NFC reader RC-S300/S1 (PaSoRi) has read/write capability with FeliCa cards / FeliCa-compatible devices and ISO/IEC 14443 Type A / Type B cards, such as Individual Number Card, Passport, and Driver's License Card.

Filing tax returns at home

You can perform final return procedures for income tax at home with the Individual Number Card and NFC reader RC-S300/S1 connected to your PC. So you do not have to visit the tax office in person.

Login authentication for telework

To cope with various workstyles, it is necessary to protect the important information on laptops and tablets by ensuring the appropriate level of data security. Companies are introducing two-factor login authentication: ownership authentication using FeliCa credentials, and knowledge-based authentication using the ID and password.

Major Products

FeliCa Standard Contactless IC Chip

This is a highly versatile IC product with secure standard FeliCa capability, supporting AES encryption standard. This product is suitable for high end secure applications, such as transportation and e-payment.

FeliCa Standard
RC-SA01

FeliCa Lite-S Contactless IC Chip

With a simplified security functionality and optimized file system, FeliCa Lite-S can be used in stickers, posters, and other such items. They conform to NFC Forum Type 3 Tag Specification.

FeliCa Lite-S
RC-S966

Major Products

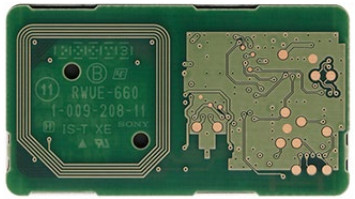
USB NFC Reader

RC-S300/S1/S1 is an NFC capable reader which can be connected to a PC via a USB port.

RC-S300/S1

Embedded NFC Reader Module

A range of NFC modules for PC, tablet and other consumer electronic devices.
They can communicate with any device conforming to the NFC Forum Specifications.



Embedded NFC Reader Module
UART Interface
RC-S660/S

FeliCa SAM for readers

The FeliCa Secure Access Module (SAM) enables various terminals to support FeliCa security functionality for a wide range of applications. This product supports both AES and DES encryption systems

FeliCa SAM for readers
RC-S500/SO2

Configuration Example using RC-S500/SO2

To develop a FeliCa secure reader system, simply insert this product into the SIM card slot of the reader terminal.

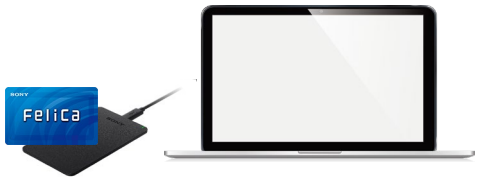
SDK for NFC/FeliCa (Software Development Kit)

SDK for NFC/FeliCa

A range of SDK products for NFC/FeliCa operating on a Windows or Linux PC to support efficient development of FeliCa applications.

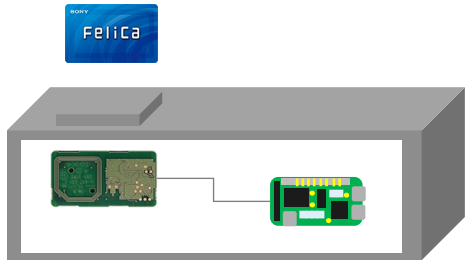
SDK for NFC **Lite**

This SDK is an efficient tool for developing various types of NFC/FeliCa™application software. Also available is a free-of charge Starter Kit for evaluation purposes.



SDK for NFC **Basic Suite** <Reference Implementation>

This SDK is a tool to effectively develop applications for embedded devices to communicate with ISO/IEC 14443 Type A / Type B cards as well as FeliCa™ cards. This SDK supports various operating systems.



IC card access services enabled by the NFC function of Smartphones

Features

- Reading and writing services to IC cards enabled by a dedicated server and the reader/writer function of NFC smartphones
- Capable to support different types of contactless IC cards in the market, including FeliCa
- Compatible with both iOS and Android

Usage Examples

E-money card top-up, payment, expiration date update and other services anytime, anywhere.

Remote user identity verification, eligibility verification, etc.

Visit our website for detailed information on NFC/FeliCa technology, products and applications.

sony.co.jp/en/felica/

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