Just tap for an easier life

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.

FeliCa

Common Criteria

**The World's First*[1]
contactless IC card chip
to acquire EAL6+*[2]**

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

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.

0.1 sec.
FeliCa

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.
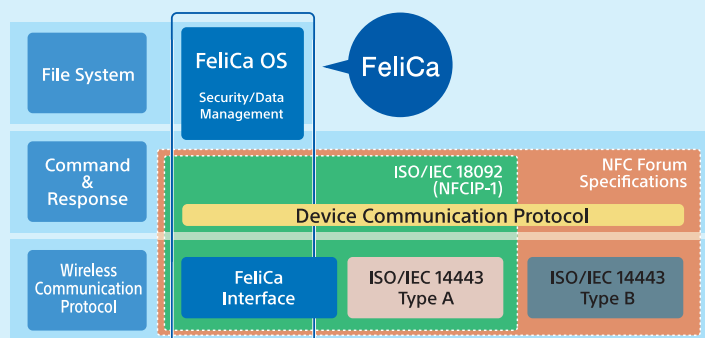
FeliCa   Encrypted

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.

e-tickets   e-money   Points
FeliCa   Coupons

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 and ISO/IEC 18092. FeliCa is one standard within the NFC framework.

File System	FeliCa OS	FeliCa
	Security/Data Management	
Command & Response	ISO/IEC 18092 (NFCIP-1)	NFC Forum Specifications
	Device Communication Protocol	
Wireless Communication Protocol	FeliCa Interface	ISO/IEC 14443 Type A	ISO/IEC 14443 Type B

*1: The world's first certification for a product that contains an embedded software and functions as a contactless IC card
*2: EAL6+ Certification of Common Criteria (ISO/IEC 15408), the International Standard for IT Security

Transport

Smooth use of various transportation systems

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.

● 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.
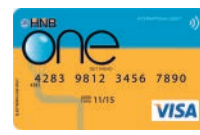
● India: Chennai Metro Travel Card

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.

● 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"

● 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.

● 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.

Payment & Retail

Supporting the cashless society

e-payment

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

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+nanaco tailplane-shaped key fob

Rakuten Edy key fob

Membership

Widely adopted for tickets and membership cards

ANA: SKiP Service

SKiP Service by All Nippon Airways enables passengers to check in and board simply by tapping a mobile wallet phone or ANA card compatible with Rakuten Edy or Suica to a reader. Earned mileage points can be converted to e-money.

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.

Golf course membership card

FeliCa cards can be used as membership cards for a golf course in Kuala Lumpur, Malaysia. The multi-application function can be used for loyalty programs, access control, and payment at the golf facilities.

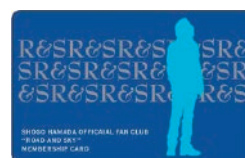Kuala Lumpur Golf & Country Club Membership Card

FeliCa Lite-S fan club cards

Fan club cards using FeliCa Lite-S enable smooth access control with a simple tap at event venues, stamp rallies, and as proof of purchase, among other things.

Spitz "Spitzbergen"

Shogo Hamada " ROAD AND SKY "

GLAY "HAPPY SWING"

Porno Graffitti "loveup!"

株式会社 エブリィ・エンタテインメント
Everytime, Everywhere, Everybody be happy !

Increasingly more possibilities FeliCa

ID, Access Control

Highly secure ID authentication

ID cards at US universities

Sony has partnered with Blackboard to provide campus solutions using FeliCa-based ID cards and NFC readers. Starting with Santa Clara University, Blackboard has now expanded to introduce FeliCa/NFC infrastructure into more than 365 universities, of which more than 60 also use FeliCa card.

SCU student ID cards

Blackboard contactless IC Card reader

ID cards for students, faculty, and employees

FCF, a shared usage format of FeliCa for ID cards, has been introduced in Japan at 347 universities and other educational institutions, as well as 110 companies and local governments. A total of 159 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.

🖥️ e-Application, Logical Access

NFC reader supporting various IC Cards

NFC reader RC-S380 (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.

PaSoRi

RC-S380

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-S380 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 knowl-edge-based authentication using the ID and password.
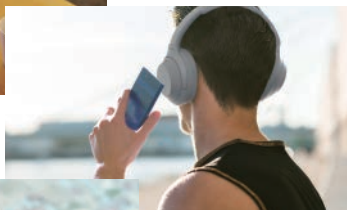
💡 CE, IoT, other   Making our lives easier

One-touch functions that use NFC

Using NFC technology to authorize devices with a single tap, Sony has developed the One-touch functions capable of data transmission. An increasing range of products comes equipped with this capability.

Glass Sound Speaker
LSPX-S1

Wireless Noise-Canceling
Headphones
WH-1000XM3

Digital Still Camera
DSC-RX100M7

Cleansui water purifier

Mitsubishi Chemical Cleansui Corp. incorporates a FeliCa Link in a faucet-mounted water purifier. Simply by touching the water purifier with the smartphone, you can check information such as the cartridge condition and expected date of replacement.

Clinsui CSP801i

Terumo HR Joint-compatible devices

Daily vital data measured with an HR Joint-compati-ble device can be transferred to a PC and shown in a graph simply by placing the device over a reader.

Blood pressure monitor   Electronic Thermometer

Major Products

FeliCa Standard Contactless IC Product
RC-SA01

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 Lite-S Contactless IC Product
RC-S966

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 SAM for Reader
RC-S500

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.

SDK for NFC/FeliCa (Software Development Kit)

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

USB NFC Reader Product
RC-S380/S

RC-S380 is an NFC capable reader which can be connected to a PC via a USB port.

RC-S380/S

Embedded NFC Reader Modules

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.

RC-S632

NFC Dynamic Tag
FeliCa Link

FeliCa Link inherits the functionality of FeliCa Plug and FeliCa Lite. In addition, it supports reader/writer functionality as well as NFC-DEP function.

RC-S732

FeliCa Plug

This product can be integrated into various types of electronic devices. It is especially suitable for health equipment, electronic toys and other small, low-power-consumption devices as its power consumption on standby is less than 0.1 uA.
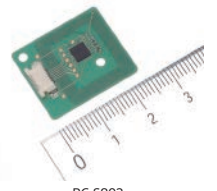
RC-S802

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

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