

Specifications

Dimensions	Approx. 60 × 11 × 100 mm (2 3/8 × 7/16 × 4 inches) (w/h/d)
Mass	Approx. 60 g (2 oz.)
External interface	USB (Low-Speed)
Cable length	Approx. 70 cm (27 5/8 inches)
Operating temperature	5°C to 35°C (41°F to 95°F)
Operating humidity	10% to 90% (no condensation)
Storage temperature	-20°C to +60°C (-4°F to +140°F)
Storage humidity	10% to 90% (no condensation)
Power requirements	5 V DC (supplied through USB)
Power consumption	Max. 100 mA (during operation)

Design and specifications are subject to change without notice.

Limited Warranty

— Contactless IC Card Reader/Writer

SONY ELECTRONICS INC. ("SONY") warrants this Product (including any accessories) against defects in material or workmanship for the 90 day period from the Product's original date of purchase (the "Warranty Period") as set forth below. Pursuant to this Limited Warranty, SONY will, for defects reported during the Warranty Period, replace the Product. In the event of a defect, this is your exclusive remedy.

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This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

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For your convenience, SONY ELECTRONICS INC. has established the following telephone number and web site for warranty service assistance, resolution of a service problem, or for product information or operation: 1-877-669-SONY (7669) or visit: www.my.sony.com/smartcard.

Precautions

Safety

- To prevent fire or shock hazard, do not expose the unit to rain or moisture.
- To avoid electrical shock, do not open the unit. Refer servicing to qualified personnel only.
- Do not allow any liquid or solid object to fall into the unit. This may cause a fire or give an electric shock. If it happens, unplug the unit from the computer immediately and contact your dealer or the Reader/Writer Customer Service Center. If you leave the unit as it is, the computer connected to the unit may be damaged.
- Do not give an extreme shock to the unit, or squeeze it strongly. This may cause a malfunction.
- Do not pull the cable strongly, bend it, or crush it. The cable may be broken, and this may cause a malfunction.
- Do not use or leave the unit:
 - In places subject to extreme high temperatures, for example near a radiator, heating vent, or in direct sunlight.
 - In places subject to mechanical vibration or shock.
 - Near any equipment that generates a strong magnetic field.
 - In places where corrosive gas is present.

Maintenance

- Clean the unit with a soft cloth or tissue paper. When the unit is very dirty, clean it with a soft cloth lightly moistened with a mild detergent solution and finish with a dry cloth.
- Do not use alcohol, thinner, or benzine to clean the unit. If you do so, the finish of the unit may be damaged or the coating may come off.
- When you use a chemical-impregnated cloth, use it according to the directions provided.
- Do not spray a volatile solvent such as insecticide toward the unit, or place rubber or vinyl products on the unit for a long time. If you do so, the finish of the unit may be damaged or the coating may come off.

Troubleshooting

If a problem occurs, check the following.

- Did you install the required software on your computer properly?
- Is the connector on the cable of the Reader/Writer seated firmly in the USB port on your computer?
- Does your computer environment meet the requirements mentioned in "System Requirements?"

If you go through these checks and do not find any possible causes of problems, carry out the self-diagnosis test, which is part of the driver and application software (FeliCa Reader/Writer Software) you need to download. (For details, see "4 Confirm the Reliability of the Operation Using the Self-Diagnosis Function." on the opposite page.)

Results of the self-diagnosis

If a result other than "Normal" appears.

→ Contact the Reader/Writer Customer Service Center.

If result is "Normal," but the card is not recognized.

→ Confirm that your card is compatible with this Reader/Writer. Use a card that is compatible with the Reader/Writer.

If the recommendations above do not resolve the problem, refer to the FAQ section on our Web site (<http://www.my.sony.com/smartcard>). Then, if the problem still persists, contact the Reader/Writer Customer Service Center.

<http://www.sony.net/>



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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Reader/Writer Customer Service Center

If you have questions about this product or the features/applications of the Smart Card, please visit: <http://www.my.sony.com/smartcard>. Or call 1-877-669-SONY (7669).

Declaration of Conformity

Trade Name:	SONY
Model:	RC-S320
Responsible Party:	Sony Electronics Inc.
Address:	16450 W. Bernardo Dr, San Diego, CA 92127 U.S.A.
Telephone Number:	858-942-2230

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTICE TO USERS

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SONY

2-159-374-11 (1)

Contactless IC Card Reader/Writer (for USB)

RC-S320

Operating Instructions

Before operating the unit, please read these Operating Instructions thoroughly and retain them for future reference.

PaSoRi FeliCa <http://www.my.sony.com/smartcard>

FeliCa is a technology system developed by Sony Corporation for contactless IC cards.

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Introduction

This product is a contactless IC card Reader/Writer that connects to the USB port on your computer. This Reader/Writer provides the ability to write information to and read information from contactless IC cards using Sony's FeliCa technology, such as the "wave" smart card. Sony's FeliCa chip technology can be incorporated into contactless IC cards and devices.

If you do not know whether your contactless IC card is compatible with the Reader/Writer, consult with an information source shown on your card about the compatibility.

System Requirements

You can use this Reader/Writer only in the United States. To use it, you need an Internet connection environment meeting the requirements below.

- Computer hardware equipped with a USB port¹⁾
- Operating system:
 - Microsoft Windows 98
 - Microsoft Windows 98 Second Edition
 - Microsoft Windows Millennium Edition
 - Microsoft Windows 2000 Professional
 - Microsoft Windows XP Home Edition
 - Microsoft Windows XP Professional

¹⁾ The USB port operation must be guaranteed by the manufacturer of the computer hardware.

Notes

- Even if your computer environment meets the requirements above, the Reader/Writer may not operate properly depending on the configuration of your software and hardware.
- Depending on the type of computer, a malfunction may occur when the computer goes into the standby mode while the Reader/Writer is operating.
- Depending on the type of USB hub you are using, the Reader/Writer may not operate properly.
- Depending on the electrical environment in and around your computer, the Reader/Writer may not operate properly.

The Reader/Writer uses the 13.56 MHz frequency band. When more than one Reader/Writer is in one location, leave one meter or more space between each Reader/Writer. In addition, make sure to keep the Reader/Writer away from any other wireless communication devices which use the same 13.56 MHz frequency band.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Unpacking

Make sure your carton contains everything listed below.

- Reader/Writer unit
- Operating Instructions (this document)

Reader/Writer Setup

When you use the Reader/Writer for the first time, perform the procedures below.

Notes

- **Do not plug the Reader/Writer into the computer before you install the FeliCa Reader/Writer Software.**
- The Reader/Writer does not work with the Smart Card unless the software has been installed onto your computer. You should have already downloaded the software that enables the Reader/Writer and Smart Card to function when you purchased or signed-up for the Smart Card on-line. If not, follow these steps.
- The FeliCa Reader/Writer Software may be updated with enhancements. You'll be notified when they occur.

1 Confirm that the Reader/Writer is unplugged from your computer.

2 Download and Install the FeliCa Reader/Writer Software.

- 1 Start up your computer.
- 2 If you use Windows 2000 or Windows XP, log on to Windows using an account/user that can install programs (Administrator Account).
- 3 Shut down all active programs. If virus protection software is active, the installation may not be completed properly.
- 4 Download the FeliCa Reader/Writer Software from our Web site (<http://www.my.sony.com/smartcard>).
- 5 Click the downloaded file and install it according to the instructions shown on the display.
- 6 If an instruction requesting you to restart the computer appears, restart the computer.

<Tips>

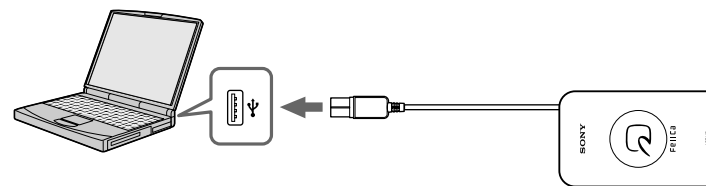
- If the installation does not complete successfully, remove the wave smart card software using [Add/Remove Applications] found in the computer's "Control Panel" (if you use Windows XP, [Add/Remove Programs]), restart the computer, and then perform the procedure over again from the beginning. Confirm that the Reader/Writer is unplugged from your computer before restarting the computer.
- For details on the installation procedure, refer to our Web site (<http://www.my.sony.com/smartcard>).

3 Plug the Reader/Writer into the USB Port on Your Computer.

Insert the connector on the cable of the Reader/Writer to the USB port on your computer. Now you are ready to put the Smart Card on the Reader/Writer and begin your Smart Card set up. For details, visit www.my.sony.com/smartcard.

Note

If you connect a USB hub between the Reader/Writer and the computer, the Reader/Writer may not be recognized properly.

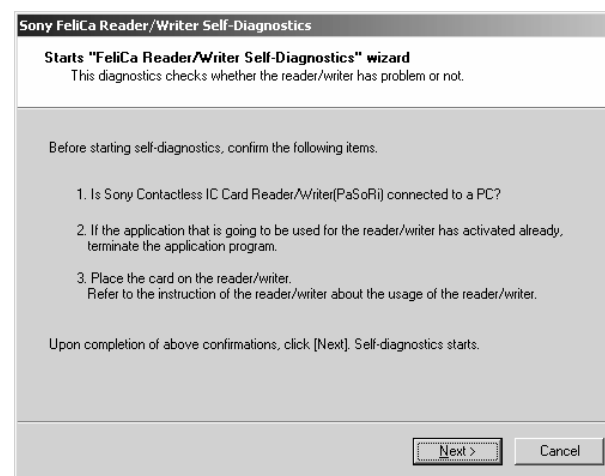


4 Confirm the Reliability of the Operation Using the Self-Diagnosis Function.

- 1 Put your Smart Card or your device using FeliCa chip technology on the Reader/Writer (For details, see "Using the Reader/Writer" on the next column).
- 2 Click the Windows Start button, point to [Programs] (if you use Windows XP, [All programs]), point to [Sony FeliCa Reader Writer], and then click [Self-diagnosis of Reader Writer].



- 3 Carry out the self-diagnosis test according to the instructions shown on the display.



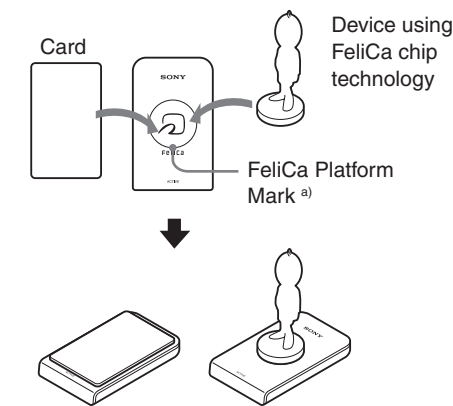
<Tip>

The self-diagnosis program can be used even if you do not put the Smart Card or device on the Reader/Writer. However, in this case, the program checks only the operation of the Reader/Writer itself. It can not check the communication function between the Smart Card or device and the Reader/Writer.

Using the Reader/Writer

1 Put Your Smart Card or Your Device Using FeliCa Chip Technology on the Reader/Writer.

Put the Smart Card or device on the Reader/Writer so that the center of the Smart Card or device comes to just above the FeliCa Platform Mark.



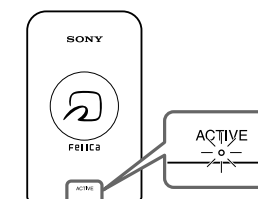
- a) A FeliCa Platform Mark indicates that the product is designed for a multiapplication platform using the FeliCa technology.

Notes

- If the surface on which you put the Reader/Writer is made of metal, the Reader/Writer may not operate properly.
- Make sure to put only one Smart Card or device on the read/write surface. If you put more than one card or device on this surface at one time, the Reader/Writer will not operate properly.
- When you put the Smart card or device on the Reader/Writer, if a portion of the card or of the device extends off the read/write surface, or if the card or device is tilted, the Reader/Writer may not operate properly.
- The timing for placing the Smart Card or device is defined by the service you use. Follow the instructions shown on the display.
- If you use Windows 2000, when you intend to unplug the Reader/Writer, first, click the [Unplug or Eject Hardware] icon on the taskbar on the Windows screen to stop the Reader/Writer device, and then, pull out the connector on the cable.

<Tip>

The ACTIVE lamp lights up or flashes to indicate that the Reader/Writer is ready to accept the Smart Card or device or that the Reader/Writer is communicating with the Smart Card or device (see the illustration below).



For the latest information on the Reader/Writer, refer to our Web site (<http://www.my.sony.com/smartcard>).

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