JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS X 6319-4 : 2016

(JICSAP/JSA)

Specification of implementation for integrated circuit cards— Part 4: High speed proximity cards

ICS 35.240.15

Reference number : JIS X 6319-4 : 2016 (E)

Date of Establishment: 2005-07-20
Date of Revision: 2016-03-22
Date of Public Notice in Official Gazette: 2016-03-22
Investigated by: Japanese Industrial Standards Committee
Standards Board for IEC area
Technical Committee on Information

JIS X 6319-4:2016, First English edition published in 2017-01

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

Printed in Japan

AT

Contents

Page

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan IC Card System Application Council (JICSAP)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS X 6319-4**:2010 is replaced with this Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

JIS X 6319 series consists of the following four parts under the general title "*Specification of implementation for integrated circuit cards*":

Part 1: Integrated circuit cards with contacts

Part 2: Proximity cards

Part 3: Common commands for interchange

Part 4: High speed proximity cards

Specification of implementation for integrated circuit cards— Part 4: High speed proximity cards

Editor's note : This English-translated edition includes some discrepancies from the original Japanese edition, which resulted from correction of errors or modifications made in the process of editing.

Introduction

This Japanese Industrial Standard has been prepared to specify the high speed contactless proximity integrated circuit cards (hereafter referred to as cards or PICCs) and the proximity coupling devices.

In order to provide the further details for interoperability of contactless interfaces (i.e. interfaces which do not use the conductive contact for signal communication or for power supply to the PICC), this Standard provides implementation specifications. Use of new standards in building and operating integrated circuit card systems is in no way constricted because contactless proximity integrated circuit cards have the potential to be used for a variety of applications and systems, while the performance of IC chips, such as power consumption, is constantly being improved by technological advances. Consideration is also given to the possibility that integrated circuit cards with or without contacts may be integrated into the same system.

The PICCs offer the functionality for:

— processing multiple files at one time;

— ensuring a transaction integrity with internal add-subtract calculation;

— bit coding for stable communication;

— response time parameters which enable timeout management for each command;

— and command recognition assuming power disruption during processing.

The PICCs are used in systems such as electronic ticketing at railway stations and event sites, which require high-speed processing of accesses during user's moving.

No International Standard corresponding to this Standard has been established at this point. Instead, **JIS X 5211** specifies the compatible proximity interface (only for contactless part).

1 Scope

This Standard specifies the physical characteristics, air interface, transmission protocols, file structure, commands and the like, which are used by high-speed proximity integrated circuit cards.

The accessing method for files that require authentication in the PICC defined by this Standard is described in Annex A (informative).

Examples of access to the PICC defined by this Standard are described in Annex B (informative) so that a reader of this Standard understands the usage of this Standard.