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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 42756.4-2023

**Cards and security devices for personal identification -
Contactless proximity objects - Part 4: Transmission protocol**

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents"

drafting:

This document is part 4 of GB/T 42756 "Card and Identification Security Equipment Contactless Proximity Object": GB/T 42756 has

The following parts have been published:

- Part 1: Physical characteristics;
- Part 2: RF power and signal interface;
- Part 3: Initialization and anti-collision;
- Part 4: Transmission protocol:

This document is equivalent to ISO /IEC 14443-4:2018 "Card and Identification Security Equipment Contactless Proximity Object Part 4

Sub: Transmission Protocol":

The following editorial changes have been made to this document:

--- Included in the amendments of ISO /IEC 14443-4:2018/Amd:1:2021, ISO /IEC 14443-4:2018/Amd:2:2020

content and the technical corrigendum content of ISO /IEC 14443-4:2018/Cor:1:2022, the outer margins of the terms involved

are marked with a vertical double line (||);

--- ISO /IEC 7816-4:2013 was replaced by ISO /IEC 7816-4:2020 (see 7:6:1), and ISO /IEC 7816-4:2020 was replaced by

The referenced content does not differ technically from the referenced content of ISO /IEC 7816-4:2013:

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

Contactless card standards include ISO /IEC 10536 (tightly coupled card), GB/T 42756 (proximity card) and GB/T 22351 (all parts

Points) (proximity card) and other types: These types of equipment are used for very close, close and long distances from the associated coupling device, respectively:

to operate:

GB/T 42756 "Card and Identity Recognition Security Equipment Contactless Proximity Object" stipulates that identification cards and identification cards in accordance with GB/T 14916

The technical requirements for flexible thin cards complying with GB/T 28177:1, and how to use these cards for information exchange: This technique provides the standard

Forms other than quasi-card formats offer the possibility to approach type objects: Also, it does not preclude the use of other technologies on the card, such as

The technology in GB/T 42756:1-2023 references:

GB/T 42756 consists of four parts:

--- Part 1: Physical properties: The purpose is to specify the physical characteristics of proximity objects:

--- Part 2: RF power and signal interface: The purpose is to specify the Proximity Coupling Device (PCD) and the Proximity Card or Object

(PICC) provides the characteristics of the field of energy and two-way communication:

--- Part 3: Initialization and anti-collision: The purpose is to specify requirements for contactless proximity object initialization and anti-collision:

--- Part 4: Transmission protocol: The purpose is to establish a half-duplex block transfer protocol required for a contactless environment and to specify activation and deactivation

A step of:

Contactless for card and identification security devices

Proximity Objects Part 4 : Transport Protocol

1 Scope

This document establishes the half-duplex block transfer protocol required for contactless environments and specifies the activation and deactivation protocols:

This document applies to the design, production, use and testing of ISO /IEC 14443 TypeA and TypeB proximity cards:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document:

ISO /IEC 7816-3 Identification cards integrated circuit cards Part 3: Card electrical signals and transmission protocols with contacts

Note: GB/T 16649:3-2006 Identification cards Integrated circuit cards with contacts Part 3: Electrical signals and transmission protocols (ISO /IEC 7816-3:

1997, IDT)

ISO /IEC 7816-4:2020 Identification card integrated circuit card Part 4: Structure, security and commands for exchange (Identifi-

Note 1: There is no technical difference between the referenced content of ISO /IEC 7816-4:2020 and the referenced content of ISO /IEC 7816-4:2013:

Note 2: GB/T 16649:4-2010 Identification card integrated circuit card Part 4: Structure, security and commands for switching (ISO /IEC 7816-4:

2005, IDT)

ISO /IEC 14443-21) Cards and identification security devices Contactless proximity objects
Part 2: Radio frequency power and signal connections

Note: GB/T 42756:2-2023 Cards and identification security equipment Contactless
proximity objects Part 2: RF power and signal interface (ISO /

IEC 14443-2:2020, MOD)

ISO /IEC 14443-3 Cards and identification security devices Contactless proximity objects
Part 3: Initialization and anti-collision

Note: GB/T 42756:3-2023 Cards and identification security equipment Contactless
proximity objects Part 3: Initialization and anti-collision (ISO /IEC

14443-3:2018, IDT)

3 Terms and Definitions

The following terms and definitions apply to this document:

The terminology databases maintained by ISO and IEC for standardization can be found at
the following URLs:

1) The fourth edition of ISO /IEC 14443-2 was published in 2020: