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

GB/T 41801.2-2022

**Information technology - Biometric System-on-Card - Part 2:
Physical characteristics**

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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 of Standardization Documents" drafted.

This document is part 2 of GB/T 41801 "Biometric Identification System on Information Technology Cards". GB/T 41801 has been released the following parts.

- Part 1. Basic requirements;
- Part 2. Physical characteristics;
- Part 3. Logical information exchange mechanism.

This document is modified and adopted ISO /IEC 17839-2.2015 "Biometric Identification Systems on Information Technology Cards - Part 2. Physical Characteristics".

Compared with ISO /IEC 17839-2.2015, this document has made the following structural adjustments.

- Chapter 2 corresponds to Chapter 3 of ISO /IEC 17839-2.2015;
- Chapter 3 corresponds to Chapter 4 of ISO /IEC 17839-2.2015;
- Chapter 4 corresponds to Chapter 2 of ISO /IEC 17839-2.2015.

The technical differences between this document and ISO /IEC 17839-2.2015 and their reasons are as follows.

--- Added the scope description of "Biometric sensor type on card", the content of this document includes the biometric sensor type on card

Description (see Chapter 1);

--- Directly write the two terms "Biometric Identification System on Card" and "Biometric Sample" in the quoted ISO /IEC 17839-1

"Terms and Definitions" chapter, and GB/T 41801.1-2022, which is modified to adopt this international standard, is included in the reference (see

Chapter 3);

--- Deleted the reference to ISO /IEC 2382-37, because the referenced terms are listed in Chapter 3;

--- Write the additional information in terms 3.4, 3.5, 3.9 in the note (see Chapter 3);

--- Directly write the two abbreviations "BSoC" and "ICC" in the quoted ISO /IEC 17839-1 into the chapter "Abbreviations" (see Chapter 5);

--- Replace ISO /IEC 7810 (see Introduction, 6.1, Chapter 7) with the normatively quoted GB/T 14916 to adapt to our country's technology

improve the operability;

--- Replace ISO /IEC 7816-1 (see 6.1) with the normatively quoted GB/T 16649.1 to adapt to the technical conditions of our country and provide

high operability;

--- Replace ISO /IEC 7816-2 (see 6.1) with the normatively quoted GB/T 16649.2 to adapt to the technical conditions of our country, and to provide

high operability;

--- Replace ISO /IEC 10373-1 (see 7.1) with the normatively quoted GB/T 17554.1 to adapt to the technical conditions of our country,

improve operability;

--- Added normative reference to GB/T 41801.3, which was referenced in 7.2;

--- Added normative reference to GB/T 26237.2, which was referenced in 3.3;

--- Added normative reference to GB/T 26237.5, which is referenced in 6.3.3.

The following editorial changes have been made to this document.

--- The title of Chapter 5 of this document is changed from "Symbols and Abbreviations" to "Abbreviations";

--- This document incorporates the new content of Chapter 2, the terms and definitions in Chapter 4 of ISO /IEC 17839-2.2015/AMD1.2021 and the

and the amendments in 6.3.1 are marked with a vertical double line (||) in the outer margin of the clause in question (see

Chapter 3, Chapter 4 and 6.3.1).

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

Biometric identification system on card (BSoC) refers to an integrated circuit with complete biometric identification capability as defined in GB/T 41801.1

Cards (ICCs), ICCs conforming to these specifications are subject to some physical limitations, which are detailed in this document. This document provides

There are two types of specifications S1 and S2 in BSoC.

Type S1 is defined in GB/T 41801.1 as an ID-1 card fully compatible with GB/T 14916. This type of BSoC specification is limited to biological

Provisions for the location of feature acquisition devices, ergonomics, and restrictions on the use of certain technologies, such as

Embossing on such cards is not permitted.

The definition of Type S2 is the same as the definition of ID-T in ISO /IEC 18328-2:2015.

GB/T 41801 "Biometric Identification System on Information Technology Card" is proposed to consist of three parts.

--- Part 1. Basic requirements. The purpose is to specify the functional architecture of on-card biometric systems, two types of on-card

Definition of biometric identification system implementation and related content of sensors and power supply of biometric identification system on card.

--- Part 2. Physical properties. The purpose is to specify the physical characteristics of biometric identification systems on cards, including biometric identification cards

size, location and size of biometric capture devices, mechanical persistence, etc.

--- Part 3. Logical information exchange mechanism. The purpose is to establish the logical data structure and registration process of the biometric identification system on the card.

procedures, discovery services, operational procedures, and feedback mechanisms during biometric collection.

Information Technology Card Biometric Identification System

Part 2. Physical Properties

1 Scope

This document specifies the following.

- a) S1 and S2 biometric card dimensions;
- b) the location and size of the biometric capture device;
- c) Biometric sensor type on the card;
- d) Minimum requirements for the biometric system on the card for.
 - 1) Mechanical durability;
 - 2) Human-machine interface and ergonomics.

Standardization of other on-card devices such as electronic displays or keyboards is outside the scope of this document.

This document applies to the design, production, testing and use of biometric identification cards.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 14916 Physical Characteristics of Identification Cards (GB/T 14916-2006, ISO /IEC 7810.2003, IDT)

GB/T 16649.1 Identification card with contacts for integrated circuit cards - Part 1.Physical characteristics (GB/T 16649.1-2006, ISO /IEC 7816-1.1998, MOD)

GB/T 16649.2 Identification Cards Integrated Circuit Cards with Contacts Part 2.Dimensions and Locations of Contacts (GB/T 16649.2-2006, ISO /IEC 7816-2.1999, IDT)

GB/T 17554.1 Identification Card Test Methods Part 1.General Characteristics Test (GB/T 17554.1-2006, ISO /IEC 10373-1.1998, MOD)

GB/T 26237.2 Information technology biometric identification data exchange format-Part 2.Fingerprint minutiae data (GB/T 26237.2-2011, ISO /IEC FCD19794-2.2004, NEQ)