

ICS 35.240.15

CCS L 70



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

GB/T 41801.1-2022

**Information technology - Biometric System-on-Card - Part 1:
Core requirements**

Issued on: October 14, 2022

Implemented on: May 1, 2023

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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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 1 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 to adopt ISO /IEC 17839-1:2014 "Biometric Identification Systems on Information Technology Cards - Part 1. Basic

Require".

The technical differences between this document and ISO /IEC 17839-1:2014 and their reasons are as follows.

---According to the fact that this document is not cited, the normative reference in Chapter 3 "Terms and Definitions" in the original text of the International Standard is deleted.

ISO /IEC 2382-37;

--- For ease of understanding, the term "biometric sample" has been added (see 3.4);

--- Use national standards instead of international standards to adapt to my country's technical conditions. GB/T 30266 instead of ISO /IEC 24787

(see 5.1), replace ISO /IEC 7810 with GB/T 14916 (see 5.2, 5.3), replace with GB/T 16649.1

ISO /IEC 7816-1 (see 5.2, 5.3), replace ISO /IEC 7816-3 (see 5.2, 6.2) with GB/T 16649.3,

use

GB/T 16649.12 replaces ISO /IEC 7816-12 (see 5.2, 6.2), and GB/T 41801.2 replaces ISO /IEC 17839.2 (see 5.3), which replaces ISO /IEC 7816 (see 6.1) with GB/T 16649.3 and GB/T 16649.12;

---Because of the relevant descriptions in the introduction, the text 5.2 of the International Standard about "This International Standard defines two different types of

The cards. S1 type and S2 type. "description of.

The following editorial changes have been made to this document.

--- The title of Chapter 4 is changed from "Symbols and Abbreviations" to "Abbreviations";

---Informative Appendix A replaces ISO /IEC 7816 in the original text of the International Standard with GB/T 16649.1.

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

Introduction

For the purpose of this document, an on-card biometric system means a portable card-sized device comprising the following elements.

Biometric collection, data processing, storage, comparison, decision-making. Physically and logically integrating sensors and signal processing onto the card

Functional extension of biometric alignment.

GB/T 16649.11-2019, ISO /IEC 19785-3, ISO /IEC 19795-7 and GB/T 30266 contain information on biological

Feature comparison techniques. On-card biometric systems are still not adequately covered. The industry needs a new card on the completely independent

A standard for biometric identification systems that enables interoperability and specifies minimum quality standards for such a system to function reliably.

Integrating the biometric sensor into the card of GB/T 14916 and testing the twisting and bending properties of it is a

technical challenges. This document describes two types of on-card biometric systems. Type S1 is a card with good flexural toughness, which fully complies with the

In accordance with the provisions of GB/T 14916; while the S2 type has different requirements in terms of size and flexibility of the card, other requirements remain unchanged, including no contact

use of the ICC interface.

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 1. Basic requirements

1 Scope

This document specifies the following.

- Functional architecture of the biometric identification system on the card;
- S1 type (in full compliance with GB/T 14916) and the definition of S2 type card biometric identification system implementation;
- the sensor type of the biometric system on the card;
- Minimum requirements for the biometric identification system on the card regarding the following.
 - * Discrimination (eg. accuracy criteria for biometric identification);
 - * interface;
 - * Power Options.

The following aspects are outside the scope of this document.

- Store on the card and compare the biometric features outside the card;
- Workload collaborative realization;

--- Detailed description and structure of individual components.

This document gives a functional architectural description of the biometric system on the card, and describes how to utilize information from other standards

Interface mapping of existing commands and data structures.

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 16649.3 Identification Cards Integrated Circuit Cards with Contacts Part 3.Electrical Signals and Transmission Protocols (GB/T 16649.3-

2006, ISO /IEC 7816-3.1997, IDT)

GB/T 16649.12 Identification Card Integrated Circuit Card Part 12.Card with Contacts USB Electrical Interface and Operating Procedures

(GB/T 16649.12-2010, ISO /IEC 7816-12.2005, IDT)

GB/T 30266 Information technology identification card biometric comparison (GB/T 30266-2013, ISO /IEC 24787.

2010, IDT)

GB/T 41801.2 Information Technology Card Biometric Identification System Part 2.Physical Characteristics (GB/T 41801.2-2022,

ISO /IEC 17839-2.2015, MOD)

ISO /IEC 14443 (all parts) Cards and identification security devices Contactless proximity objects (Cardsandsecurityde-