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

WS/T 543.5-2017

**Resident health card technical specifications - Part 5: Terminal
technical specification
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

WS/T 543 "Technical Specifications for Resident Health Cards" is divided into 6 parts.

--Part 1: General provisions;

--Part 2: Technical Specifications of User Card;

--Part 3: User Card Application Specification;

--Part 4: User card command set;

--Part 5: Terminal technical specifications;

--Part 6: User card and terminal product testing specifications;

This part is part 5 of WS/T 543.

Drafting organizations of this section. National Health and Family Planning Commission Statistical Information Center, Foshan Municipal Health and Family Planning Bureau, Liaoning Provincial Health Information Center, Henan Provincial Health and Family Planning Commission Information Center, Jiangsu Provincial Health Statistics Information Center, the First Affiliated Hospital of China Medical University.

1 Scope

This part of WS/T 543 specifies the product form, appearance structure, function, Communication methods, safety modules, power supplies, interfaces, climate environmental conditions, mechanical environmental conditions, reliability, safety, electromagnetic compatibility, etc.

The above technical details put forward the requirements for the terminal sign, packaging, transportation and storage of the residents' health card.

This part is applicable to the research and development units, management agencies, issuing agencies and users that design, produce, issue, and use resident health card terminals Unit etc.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this document.

GB/T 191 Packaging, Storage and Transportation Graphic Mark GB 4943 Safety of Information Technology Equipment GB/T 6107 Interface between data terminal equipment and data circuit termination equipment using serial binary data exchange GB 9254 Information Technology Equipment Radio Disturbance Limits and Measurement Methods GB/T 14916 Identification card physical characteristics GB/T 16649.3 Identification card with contact integrated circuit card Part 3: Electrical signal and transmission protocol GB/T 17618 Information Technology Equipment Immunity Limits and Measurement Methods GB/T 17625.1 EMC limit harmonic current emission limit (equipment input current per phase $\leq$ 16A) JR/T 0025 China Financial Integrated Circuit (IC) Card Specification ISO/IEC 7810 identification card physical characteristics ISO/IEC 7811 identification card recording

technology ISO/IEC 14443 identification card non-contact integrated circuit card proximity card

3.1 Terms and definitions

The following terms and definitions defined in WS/T 543.1 apply to this document.

3.1.1

Integrated circuit card ID-1 type card with one or more integrated circuits (as described in ISO 7810, ISO 7811, ISO 7812 and ISO 7813).

3.1.2

Resident health card terminal Resident health card terminals such as handheld resident health card readers, desktop IC card readers, built-in or external (host computer) Readers for people's health cartoons. This type of product can complete identification and various operations on residents' health cards in online or offline mode with the computer.

3.1.3

Resident health card self-service terminal Special equipment or devices provided by service providers to implement self-service for residents' health cards.

3.2 Abbreviations and symbols

The abbreviations and symbols in Table 1 apply to this document.

4.1 Product form

The product form is as follows.

- Resident health card reader.
- Resident health card self-service terminal.

4.2 Appearance and structure

details as follows.

- The structure should be complete and tidy; the surface coating should be even, and there should be no blistering, cracking, shedding or abrasion; there should be no obvious dents, Damage, scratches, deformation and pollution, etc.; metal parts and components should be free from corrosion and other mechanical damage;
- The connection of the parts and components of the terminal should be tight and not loose;
- There should be no temporary wiring inside or outside the terminal;
- The indicator light should be clearly marked;

--The terminal should have nameplates, signs and trademarks.

4.3.1 Main functions

It can read the data in the resident's health card chip, and the time for the terminal to read the card to identify the information in the data area does not exceed 1s, and the built-in SAM card is used for safety authentication function.

The resident health card reader/writer needs to have an indicator light prompt function.

4.3.2 Contact card interface

Should comply with JR/T 0025 regulations.

4.3.3 SAM card interface

--Have at least one SAM card holder with ID-000 specifications that meets the requirements of GB/T 14916;

--The communication protocol complies with GB/T 16649.3, and supports reading and writing CPU cards with T=0 protocol.

4.3.4 Contactless card interface

details as follows.

--Comply with ISO/IEC 14443 (TypeA and TypeB) standards;

--With collision detection function, there will be prompt function when collision is detected;

--The field strength range is 1.5A/m ~7.5A/m, the reading distance of non-sucking card readers is 0cm ~ 3cm, the slotting electric card reader the card reading distance is 0cm-3cm.

4.4.1 Terminal communication interface

The terminal communication interface is a USB interface or RS232-C interface, which meets the communication interface requirements of GB/T 6107, and can be connected to a computer or Other server equipment. Download operation commands to the terminal via the communication interface and receive information returned by the terminal.

4.4.2 USB data transfer mode

The USB communication transmission of this terminal adopts HID protocol. The HID agreement is as follows.