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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GA 467-2004

Replacing GA 467-2013

Technical specifications for interfaces of secure access modules for Resident Identity Card authentication

居民身份证验证安全控制模块接口技术规范

(English Translation)

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Foreword

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

This standard replaces GA 467-2013 "Resident ID Card Verification Security Control Module Interface Technical Specification". Same as GA 467-2013 in addition to editorial changes, the main technical changes are as follows.

--- From mandatory standards to recommended standards.

---Modified the scope statement (see Chapter 1, Chapter 1 of the 2013 edition).

---Added the terms and definitions of the identification code (see 3.3).

--- Modify "4 abbreviations" to "4 symbols and abbreviations" and add the description of symbols in the following text (see Chapter 4, 2013 edition Chapter 4).

---Added a general description of all types of verification security control modules, and added SAM_A_I, SAM_A_II, SAM_A_ Description of abbreviations for III (see Chapter 4).

--- Amend the title of Chapter 5 to "SAM_A Overview" (see Chapter 5, Chapter 5 of the 2013 edition).

---Added the "SAM_A category" section (see 5.1).

--- Modify the original 5.1 "SAM_A interface" to 5.2 (see 5.2, 5.1 in the 2013 edition).

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---Added the description of the physical interface of the radio frequency module of SAM_A_II and SAM_A_III (see 6.1).

--- Added the description of the data transmission mode of SAM_A_II and SAM_A_III (see 6.2.1).

---Modified the communication time parameters of the parallel data transmission mode of the radio frequency module interface (see 6.2.4.2, 6.2.4.2 of the 2013 edition).

--- Modify the maximum waiting time of SAM_A specified in "SAM_A Receiving Timing" to 15ms (see 6.2.4.2.2 and 6.2.5.4.3, the 2013 version 6.2.4.2.2 and 6.2.5.4.3).

---Modified the serial transmission rate selection definition of the radio frequency module interface, and modified the "reserved" to 1Mbps (see 6.2.5.2, 2013 6.2.5.2 of the year edition).

---Modified the communication time parameters of the serial transmission mode of the RF module interface, and revised each time parameter under the original speed from the determined value Change to the range value, increase the rate value of 1Mbps, and modify the rate unit from kHz to kbps (see 6.2.5.4.4, 2013 Version 6.2.5.4.4).

---Modified the maximum value of tlow and thigh in the RESET signal sequence (see 6.2.6, 2013 version 6.2.6).

---Added the description of the physical interface of the business terminal of SAM_A_II and SAM_A_III (see 7.1).

--- UART descriptions for SAM_A_II and SAM_A_III have been added (see 7.2.2).

---Added USB descriptions for SAM_A_II and SAM_A_III (see 7.2.3).

---Modified the original "7.4.1 Command Set", "7.4.2 Response Code" and "7.5.1 Command Description", and integrated the three sections into one "7.4.1 Command and Response code overview", subdivide "7.4.1.1 command set" and "7.4.1.2 response code set" under 7.4.1 (see 7.4.1, 2013 edition 7.4.1, 7.4.2, 7.5.1).

---Added the commands of equipment status management, equipment mode management, ID verification, and security service in "7.4.1.1 Command Set" the command set is distinguished, and the original command set is modified in each category to the support command set of SAM_A_I and SAM_A_II.

The command set of SAM_A_III (see 7.4.1.1, 7.4.1 of the 2013 edition).

---Added the description of the response code corresponding to different types of SAM_A, and added the new response code of SAM_A_III (see 7.4.1, 7.4.2 of the 2013 edition).

--- Deleted "7.5 command and response code description", put the content of the original 7.5 into 7.4, and follow the device status management class and device mode to compile commands in the directories of management, ID card verification, and security services;

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add new commands in SAM_A_III (see 7.4.2, 7.4.3, 7.4.4, 7.4.5, 7.5 in the 2013 edition).

---Added the description of resetting the radio frequency module (see 7.4.2.1).

--- The original "reading machine readable text information and photo information" command is revised to "verify the ID to return text information and photo information" Information", and deleted the limitation on the length of the information (see 7.4.1 and 7.4.4.3, 7.4.1 and 7.5.9 in the 2013 edition).

---Modify the expression of the original "Machine Readable Text Information, Photo Information and Fingerprint Information" command to "Verify ID and return text information, Photo information and fingerprint information", and delete the restriction on the length of the information (see 7.4.1 and 7.4.4.4, 7.4.1 of the 2013 edition and 7.5.10).

---Revised the contents of the original Appendix A "34-pin socket" and Appendix B "Service terminal interface" and merged them into Appendix A "SAM_A_I Definitions and electrical characteristics" (see Appendix A, Appendix A and Appendix B of the 2013 edition).

--- Amend Appendix B to "SAM_A_II Interface Definition and Electrical Characteristics" (see Appendix B, Appendix B of the 2013 edition).

---Added Appendix C "SAM_A_III Interface Definition and Electrical Characteristics" (see Appendix C).

Please note that certain contents of this document may involve patents. The issuing agency of this document is not responsible for identifying these patents.

This standard was proposed by the Public Security Administration of the Ministry of Public Security.

This standard is under the jurisdiction of the Computer and Information Processing Standardization Technical Committee of the Ministry of Public Security.

Drafting organizations of this standard. Institute of Data Communication Science and Technology, Public Security Administration of the Ministry of Public Security, First Research Institute of the Ministry of Public Security, Household Administration of the Ministry of Public Security Science Research Center.

1 Scope

This standard specifies the technical requirements for the radio frequency module interface and the service terminal interface of the security control module for resident ID card verification.

This standard applies to the design, production, use and testing of related products that use resident ID cards to verify security control modules.

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

GB/T 20518 Information Security Technology Public Key Infrastructure Digital Certificate Format GB/T 32905 Information Security Technology SM3 Cipher Hash Algorithm GB/T 32907 Information Security Technology SM4 Block Cipher Algorithm GB/T 32918 (all parts) Information security technology SM2 elliptic curve public key cryptographic algorithm GA/T 449 Resident ID card terms GA/T 490 National ID Card Machine Readable Information Specification

3 Terms and definitions

The following terms and definitions defined in GA/T 449 apply to this document.

Business terminal applicationterminal Connected with SAM_A, can send operation commands to SAM_A, receive and process the entities that SAM_A returns results.

RF module RFmodule

The electronic circuit that is embedded in the resident ID card reading machine to communicate with the resident ID card dedicated chip for radio frequency communication.

Identificationcode

Identification data generated based on ID card information.

4.1 Symbols

The following symbols apply to this document.

H(). HASH value calculated by SM3 commercial secret algorithm.

HMAC(). HMAC value calculated using SM3 commercial secret algorithm.

Sign(). The signature generated by SM2 commercial secret algorithm.

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