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

GB/T 16649.12-2010

**Identification cards -- Integrated circuit cards -- Part 12: Cards
with contacts -- USB electrical interface and operating
procedures**

识别卡 集成电路卡 第12部分：带触点的卡-USB电气接口和操作规程

(English Translation)

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Foreword

GB/T 16649 in the general title "Identification cards - Integrated circuit card" in the current by the following components.

- Part 1. Cards with contacts - Physical characteristics;
- Part 2. Dimensions and location of the contacts Cards with contacts;
- Part 3. Cards with contacts - Electronic signals and transmission protocol;
- Part 4. for structural, security and command exchange;

- Part 5. National numbering system and registration procedure for application identifiers;
- Part 6. inter-industry data elements;
- Part 7. card for Inter Structured Query Language (SCQL) trade order;
- Part 8. Security related inter-industry commands;
- Part 9. Commands for card management;
- Part 10. Cards with contacts synchronization signals and answer to reset the card;
- Part 11. Personal verification through biometric methods (under development);
- Part 12. Cards with contacts - USB electrical interface and operating procedures;
- Part 13. In a multi-application environment, application management commands (under development) is used;
- Part 15. Application of password information.

This section GB/T 16649 Part 12.

This section identical with the international standard ISO/IEC 7816-12:2005 "Identification cards - Integrated circuit cards - Part 12. Cards with contacts USB electrical interface and operating procedures "(in English).

For ease of use, this section made the following editorial changes.

- a) Remove international standards preface;
- b) to the "File" to "in this section." this section of the Appendix A, Appendix B, Appendix C, Appendix D is informative appendix.

This part of the National Information Technology Standardization Technical Committee (SAC/TC28) and focal points.

Introduction

GB/T 16649 series of international standards is to provide an IC card parameters and switching IC card use. IC card is in information exchange (on the exchange of information between the outside world and agreed by the integrated circuit card) identification card. As a result of the exchange of information, the card transfer letter Information (results, data storage) and/or change its content (data storage, the result memory).

--- There are five section provides card with contacts, including three section also provides the electrical interface.

- GB/T 16649.1 defines the physical characteristics of the card with contacts;
- GB/T 16649.2 defines the size and location of the contacts;

- GB/T 16649.3 provides asynchronous card electrical interface and transmission protocols;
- GB/T 16649.10 provides synchronous card electrical interface and answer to reset;
- GB/T 16649.12 specifies electrical interface and operating procedures USB card;
- All other parts are independent of the physical interface technology, they apply through the contacts and/or radio access card.
- GB/T 16649.4 defines the organization, security and commands for interchange;
- GB/T 16649.5 defines the application provider's registration;
- GB/T 16649.6 provides for the exchange of inter-industry data elements;
- GB/T 16649.7 provides for structured card query language commands;
- GB/T 16649.8 provides commands for safe operation;
- GB/T 16649.9 specifies commands for card management;
- GB/T 16649.11 prescribed by biometric authentication method;
- GB/T 16649.15 specifies cryptographic information application.

When this part of the release mechanism to draw attention to the fact that this part of the statement of compliance may involve use of the following patents.

WO00/16255, and the card data transmission method, March 23, 2000 WO01/69881, a method of communication between the smart card and the main station, the September 20, 2001 WO01/57684A1, the portable electronic device by a microcomputer external device protocol transport protocol unit, August 2001 9th 0001399/France, a portable electronic device by a microcomputer external device protocol transport protocol unit 09/775 668/US, a portable electronic device by a microcomputer external device protocol transport protocol unit 1904043/Europe, the portable electronic device by a microcomputer external device protocol transport protocol unit 1804474/China, the portable electronic device by a microcomputer external device protocol transport protocol unit PCT/FR01/00326, by a microcomputer external device protocol for the transmission protocol unit portable electronic device US6148354, PC-based u disk architecture US6763399, by the USB port with a USB host interactions USB key equipment this part of the issuing authority for these patents range, validity and verification of information not made any comments.

The patent holder has ISO and IEC assurances, willing to negotiate with applicants from around the world in a fair and equitable conditions License. To this end, the holder of these patents has been registered ISO and IEC . Related information can be found at.

Liaison Patent No.

SchlumbergerSystèmes, France WO00/16255 WO01/69881 GEMPLUS, France WO01/57684A1 0001399/France/granted 09/775 668/US/approval

1904043/Europe/approval 1804474/China/approval PCT/FR01/00326/approval M-Systems, Israel US6148354 AladdinKnowledgeSystems, US US6763399 InfineonTechnologies company did not discriminate any patents, but confirmation has been prepared under the premise of reasonable and equitable acquired and pending patents related to this part of the terms of use and sale of licensing.

The following companies may hold patents related to this section, but has not provided details of the patent or license has not agreed to provide.

OrgaKartensystemeGmbH, Germany AU752627 Renesas, Japan US20050052924 US20040070952 STMicroelectronics US6769622 WO02/317161 Please note that in addition to the already identified patents, some of the contents of this section may involve some other special addition to the above patents Lee. This part of the release mechanism does not assume the responsibility to identify these patents.

Identification cards - Integrated circuit card Part 12. Cards with contacts USB electrical interface and operating procedures

1 Scope

This section GB/T 16649 specifies the operating conditions provided USB interface IC card. Figure 1 shows a USB interface contacts this relationship between the allocation and distribution and GB/T 16649.3 used in contact allocation.

Contact assignment 1 USB interface with IC cards

2 Normative references

The following documents contain provisions which, through reference GB/T 16649 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 16649.2 Identification cards Contact IC card - Part 2. Dimensions and location of the contacts (GB/T 16649.2-2006, ISO/IEC 7816-2:1999, IDT) GB/T 16649.3 Identification cards contact IC cards - Part 3. Electrical interface and transmission protocol (GB/T 16649.3-2006, ISO/IEC 7816-3:1997, IDT) ISO/IEC 7816-2:1999/Amd.1.2004 Identification cards Contact IC card - Part 2. Dimensions and location contact Set Supplement 1. C4 and C8 Contact allocation