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CCS L71



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

**GB/T 42587-2023**

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**Information technology - Automatic identification and data  
capture techniques - Data carrier identifiers**

信息技术 自动识别与数据采集技术 数据载体标识符

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## Table of Contents

|                                              |    |
|----------------------------------------------|----|
| 1 Scope .....                                | 1  |
| 2 Normative references .....                 | 1  |
| 3 Terms, Definitions and Abbreviations ..... | 1  |
| 17 Reference .....                           | 19 |

### 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 for Standardization Documents" drafting: This document is modified to adopt ISO /IEC 15424:2008 "Information Technology Automatic Identification and Data Acquisition Technology Data Carrier Identifier (including code system identifiers)": Compared with ISO /IEC 15424:2008, this document has made the following structural adjustments:

---3:1:2 corresponds to 3:1:3 in ISO /IEC 15424:2008;

---4:1~4:3 correspond to 4:2~4:4 in ISO /IEC 15424:2008, and 4:3:1 corresponds to ISO /IEC 15424:2008 4:

4 Suspension section; 4:3:2~4:3:11 corresponds to 4:4:1~4:4:10 in ISO /IEC 15424:2008, and 4:3:13 corresponds to ISO /IEC 15424:2008 4:4:11;4:3:15 in IEC 15424:2008 corresponds to 4:4:12;4:3:17~4:3:19 in ISO /IEC 15424:2008 4:4:13~4:4:15 in ISO /IEC 15424:2008; 4:3:21~4:3:34 should correspond to ISO /IEC 15424:2008 4:4:16~4:4:29;

--- Deleted Appendix A of ISO /IEC 15424:2008, Appendix A and Appendix B correspond to Appendix B and Appendix B of ISO /IEC 15424:2008 Appendix C: The technical differences between this document and ISO /IEC 15424:2008 and their reasons are as follows:

--- Changed the "scope" of ISO /IEC 15424:2008 (see Chapter 1) to adapt to my country's national conditions;

--- Replaced ISO /IEC 646:1991 with the normatively referenced GB/T 1988-1998, the degree of consistency between the two documents To be equivalent (see Chapter 4), in order to adapt to the national conditions of our country;

--- Deleted 3:1:2 and 3:1:4 of ISO /IEC 15424:2008 to adapt to my country's national conditions;

--- Deleted 4:1 of ISO /IEC 15424:2008 to adapt to my country's national conditions;

--- Change the code system "reserved" of the code characters "g", "h", "i" and "m" columns

to "grid matrix code", "Hanxin code" and "Dingjiu matrix diagram" respectively code" and "tight matrix code" (see Table 1) to adapt to the published national code system standards;

--- Added "grid matrix code" (see 4:3:12) to adapt to the published national code system standards;

--- Added "Hanxin Code" (see 4:3:14) to adapt to the published national code system standards;

--- Added "Dingjiu matrix image code" (see 4:3:16) to adapt to the published national standard of code system;

--- Added "tight matrix code" (see 4:3:20) to adapt to the published national code system standard;

## 1 Scope

GB/T 42587-2023 deals with a small prefix that carries a large amount of weight. When a scanner reads a barcode or an RFID tag and passes the data on, the receiving system needs to know what kind of carrier it came from - a Code 128 symbol, a Data Matrix, a QR code, an RFID tag - because the same characters can mean different things depending on the carrier and on how it was encoded. The data carrier identifier is the short code prepended to the transmitted message that says so. This document specifies the structure of that identifier's code system, the code characters used, and the correction characters, and states the requirements that automatic identification and data capture equipment must meet in respect of data carriers. A normative annex covers code simulation and an informative annex gives the coding table. It applies to the data processing and transmission of automatic identification and data capture equipment. Under ICS 35.040 and CCS L71, it is written for the makers of scanners and readers, for the middleware and system integrators that consume their output, and for anyone whose data pipeline has to distinguish carriers reliably rather than by inference.

This document specifies the code system identifier structure, code characters and correction characters of data carrier identifiers in automatic identification and data acquisition technology: It specifies the requirements of automatic identification and data acquisition equipment for data carriers: This document applies to the data processing and transmission of automatic identification and data collection equipment:

## 2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB/T 1988-1998 Seven-bit coded character set for information exchange in information technology (equiv ISO / IEC 646:1991)

### 3 Terms, Definitions and Abbreviations 3:

1 Terms and Definitions The following terms and definitions apply to this document: 3:1:1 code character codecharacter The second character in the symbology identifier string that typically indicates to the host the barcode symbology of the symbol being read: 3:1:

2 Correction character modifiercharacter One or more characters following the code character in the symbology identifier string, indicating optional options or treatments to apply to the symbol: 3:

2 Abbreviations The following abbreviations apply to this document: FNC: Function Character (FunctionCharacter) RF: Radio Frequency (Radio Frequency)

1 Structure The symbology identifier shall be the GB/T 1988-1998 character string whose prefix is fixed by the reading device to the data contained in the barcode symbol: