ICS 35.040
CCS A24

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 31866-2023

Replacing GB/T 31866-2015

Identification system for internet of things - Ecode of entity code

物联网标识体系 物品编码Ecode

Issued on: May 23, 2023 **Implemented on: December 1, 2023**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

Table of Contents

Foreword

This document was issued on 23 May 2023 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 December 2023.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

It is classified under ICS 35.040, Chinese classification A24.

It replaces GB/T 31866-2015, which is superseded.

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 replaces GB/T 31866-2015 "Internet of Things Identification System Item Code Ecode", and is consistent with GB/T 31866-2015

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

---Changed the definition of the term "coding system identification" (see 3.3, 3.3 of the.2015 edition);

--- Deleted the agreement (see Chapter 4 of the.2015 edition);

--- Added the coding principle of Ecode (see Chapter 4);

---Changed the description of the encoding structure of Ecode, and clarified the value ranges of the encoding scheme identifier (NSI) and master code (MD) of each version (V)

Circumference (see Chapter 5, Chapter 5 of the.2015 edition);

---Changed the positioning of Ecode-V0, Ecode-V0 is dedicated to compatibility with the global unified identification system (GS1 system) (see

5.2.1, 6.1 of the.2015 edition);

--- Increased representation of Ecode (see Chapter 6);

--- Changed the assigned (V) and (NSI) (see Appendix B, Appendix A of the.2015 edition).

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

This document is proposed and managed by the National Article Code Standardization Technical Committee (SAC/TC287).

This document was drafted by. China Article Numbering Center, Guangdong Nuclear Power Joint Venture Co., Ltd., Zhejiang Institute of Standardization, China Water Resources and Electric Power

Materials Group Co., Ltd., Jilin Special Equipment Inspection Center, Quality and Standardization Research Institute of Inner Mongolia Autonomous Region, National Energy Conservation Center, Beijing

Network Imagination Technology Development Co., Ltd., Shandong Institute of Standardization, Beijing Jiaotong University, and Comprehensive Support Center of Agriculture and Animal Husbandry Department of Inner Mongolia Autonomous Region.

The main drafters of this document. Zhang Chenghai, Luo Qiuke, Li Sucai, Sun Junlin, Li Jianhua, Zhang Gang, Fang Yan, Du Jingrong, Zhang Longjiang, Wang Bin,

Li Xingjun, Ren Jie, Yang Shaopeng, Zhang Duo, Ding Wei, Wu Che, Li Mengdie, Meng Ruopu, Zhang Tianyi, Lu Xiaojiao, Qin Lijuan, Zhang Fusheng, Gu Haitao, Luo Xiang,

Liu Lihong, Zhang Qiuxia.

The release status of previous versions of this document and the documents it replaces are as follows.

---First published as GB/T 31866-2015 in.2015;

--- This is the first revision.

IoT identification system item code Ecode

1 Scope

GB/T 31866-2023 defines Ecode, the item code used to identify physical objects within the Chinese Internet of Things identification system - the coding principles, the coding structure and the representation, followed by three annexes: the scope of application of each Ecode version with coding examples, the assigned version values and numbering system identifiers, and the rules for converting between the plain text and the binary representation of a code. Those two representations exist because one identity has to survive two very different journeys: printed or keyed as characters a person can read, and carried in the handful of bytes an RFID tag or a sensor message can spare. If the conversion between them is not fixed in one document, two readers of the same tag can resolve it to two different objects, and a supply chain loses the ability to say what it is actually holding. The assigned identifiers in the normative annex are what stop separate issuing bodies from minting codes that collide. It is the base document for anyone building or auditing an Ecode deployment - code issuers, tag and reader vendors, systems integrators, and the sector guidelines that apply Ecode to a particular product family. It is used for the coding, collection and exchange of item information.

This document specifies the coding principle, coding structure, and representation form of the item code Ecode in the IoT identification system.

This document is applicable to the coding, information collection and exchange of items in the IoT identification system.

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 12905 Barcode Terminology

Registration and management of GB/T 35422 IoT identification system Ecode

ISO /IEC 19762 Information technology Automatic identification and data capture technology (AIDC) harmonized vocabulary [Informationtechnolo-

3 Terms and Definitions

The following terms and definitions defined in GB/T 12905 and ISO /IEC 19762 apply to this document.

3.1

Item code Ecode Ecodeofentitycode

A unified code for items in the IoT identification system.

Note. Abbreviated as Ecode.

3.2

version version;V

In Ecode encoding, the code used to distinguish different Ecode encoding structures.

3.3

In Ecode encoding, the code used to indicate the encoding scheme under a certain version.

3.4

Master code masterdatacode; MD

In Ecode encoding, the code representing master data in a certain industry or application system.

4 coding principles

4.1 Uniqueness

An item corresponds to only one Ecode; an Ecode corresponds to only one item.

4.2 Compatibility

Ecode encoding is compatible with various existing and applied encoding schemes stipulated by relevant international and domestic standards.