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

GB/T 41732.1-2022

**Radiofrequency identification of animals - Advanced
transponders - Part 1: Air interface**

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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 of Standardization Documents" drafted.

This document is part 1 of GB/T 41732 "Animal Radio Frequency Identification Enhanced Radio Frequency Identification Tags". GB/T 41732 has been issued

The following parts are distributed.

--- Part 1. Air interface.

This document is modified and adopted ISO 14223-1.2011 "Animal Radio Frequency Identification Enhanced Radio Frequency Identification Tags Part 1. Air Interface".

This document has the following structural adjustments compared to ISO 14223-1.2011.

--- Chapter 3 corresponds to Chapter 4 of ISO 14223-1.2011, Chapter 4 corresponds to Chapter 5 of ISO 14223-1.2011, and Chapter 5 corresponds to Chapter 5 of ISO 14223-1.2011

Should ISO 14223-1.2011 Chapter 6, Chapter 6 corresponds to ISO 14223-1.2011 Chapter 3.

The technical differences between this document and ISO 14223-1.2011 and their reasons are as follows.

--- Modified the scope of application of the standard (see Chapter 1) to adapt to the development of my country's industry;

--- Replace the reference in ISO 14223-1.2011 with the Chinese standardization document GB/T 20563 that adopts the international standard

ISO 11784 (see 3.1, 3.25, Chapter 6, Chapter 7) to adapt to the technical conditions of our country;

---Replace the reference of ISO 14223-1:2011 with GB/T 22334-2008, a Chinese standardization document that adopts international standards

ISO 11785:1996 (see 3.1, 3.25, Chapter 6, Chapter 7, 8.1, 8.4, Chapter 9) to adapt to the technical conditions of our country;

---Replace the reference of ISO 14223-1:2011 with GB/T 41734.1-2022, which is a Chinese standardization document that adopts international standards.

ISO 24631-1:2017 (see 6.1) to adapt to the technical conditions of our country;

---Replace ISO 14223-1:2011 reference with GB/T 41734.2-2022, which is a Chinese standardization document that adopts international standards

ISO 24631-2:2017 (see 6.2) to adapt to the technical conditions of our country.

The following editorial changes have been made to this document.

--- Deleted the note in Appendix B.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

The technical concept of enhanced radio frequency identification tags for animal identification is based on the principle of radio frequency identification (RFID), which is GB/T 20563 and

An extension of GB/T 22334. In addition to the transmission of the animal's unique identification code, the application of enhanced technology facilitates additional information (integrated data

library) storage and retrieval, authentication, and reading data from integrated sensors, etc. GB/T 41732 mainly specifies enhanced radio frequency identification

Label-related interfaces, instructions, codes and procedures, GB/T 41732 is intended to be composed of 3 parts.

--- Part 1. Air interface. The purpose is to standardize the air interface between RFID readers and enhanced RFID tags.

--- Part 2. Code and instruction structure. The purpose is to standardize the code and command structure for enhanced RFID tags.

--- Part 3. Applications. The purpose is to standardize the applications used to enhance RFID tags.

Animal RFID Enhanced RFID Tag

Part 1. Air Interface

1 Scope

This document specifies the air interface between radio frequency identification readers and enhanced radio frequency identification tags for animal radio frequency identification. This article

The requirements of the software are fully compatible with the contents of GB/T 20563 and GB/T 22334.

This document applies to enhanced radio frequency identification tags used in animal farming.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 20563-2006 Animal Radio Frequency Identification Code Structure (ISO 11784.1996, MOD)

GB/T 22334-2008 Technical guidelines for animal radio frequency identification (ISO 11785.1996, MOD)

GB/T 41734.1-2022 Animal Radio Frequency Identification Part 1. Radio Frequency Identification Tags and GB/T 20563 and GB/T 22334

Conformance assessment (including issuance and use of manufacturer codes) (ISO 24631-1.2017, MOD)

GB/T 41734.2-2022 Animal Radio Frequency Identification Part 2. Radio Frequency Identification Reader and GB/T 20563 and GB/T 22334

Conformance assessment of (ISO 24631-2.2017, MOD)

ISO 14223-2.2010 Animal Radio Frequency Identification Enhanced Radio Frequency Identification Tags Part 2. Code and Command Structure (Radiofre-

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

Enhanced RFID tag advancedtransponder

Equipped with data storage retrieval, integrated sensors and other equipment, in line with ISO 14223 and with GB/T 20563-2006,

GB/T 22334-2008 compliant radio frequency identification tags.

3.2

enhanced mode advancedmode

How an enhanced RFID tag works after receiving a valid command.

3.3

bitrate

The number of bits transmitted per second.