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# NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA



# GB/T 46921-2025

## Professional digital trunking communication systems based on 12.5 kHz TDMA channels - Compatibility test suite

基于12.5kHz信道的时分多址（TDMA）专用数字集群通信系统 兼容性测试

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**Standardization Administration of the PRC**

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## Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document is one of a series of technical specifications for dedicated digital trunking communication systems based on a 12.5kHz channel using Time Division Multiple Access (TDMA). The following standards have been published.

---GB/T 46923 General Technical Specifications for Dedicated Digital Trunking Communication Systems Based on 12.5kHz Channel Time Division Multiple Access (TDMA) beg";

---GB/T 34991 Air Interface Material for Dedicated Digital Trunking Communication Systems Based on 12.5kHz Channel for Time Division Multiple Access (TDMA) "Technical Specifications for Data Link Layer and Data Layer";

---GB/T 34992 Air Interface Call for a Dedicated Digital Trunking Communication System Based on a 12.5kHz Channel for Time Division Multiple Access (TDMA) Called the "Control Layer Technical Specification";

---GB/T 46919 Mobile Station Technology for Time Division Multiple Access (TDMA) Dedicated Digital Trunking Communication Systems Based on 12.5kHz Channel specification";

---GB/T 46920 Security Technical Requirements for Dedicated Digital Trunking Communication Systems Based on Time Division Multiple Access (TDMA) Channels (12.5kHz) beg";

---GB/T 46922 Interconnection Technology for Dedicated Digital Trunking Communication Systems Based on 12.5kHz Channel (Time Division Multiple Access (TDMA)) Technical Specifications;

---GB/T 46921 Compatibility Testing of Dedicated Digital Trunking Communication Systems Based on 12.5kHz Channel try". Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the Ministry of Industry and Information Technology of the People's Republic of China. This document was drafted by: Science and Technology Information Bureau of the Ministry of Public Security, First Research Institute of the Ministry of Public Security, Hytera Communications Corporation, and Sichuan Haigeheng. TongZhuanwang Technology Co., Ltd., Beijing ZTE Gaoda Communication Technology Co., Ltd., Beijing Wange Digital Communication Technology Co., Ltd., Hangzhou YouNeng Telecom Systems Co., Ltd., Eastern Communications Co., Ltd., Tianjin 712 Mobile Communications Co., Ltd., Motorola Solutions (China) Limited Liability Company, Guangzhou Weide Technology Co., Ltd., Fujian Kelixun Communication Co., Ltd., Beijing Huatong Professional Wireless Communication Technology Innovation Alliance Ministry of Public Security Security and Police Electronic Products Quality Inspection Center. The main drafters of this document are. Sun Huiyang, Yuan Yifang, Zhang Lihua, Fan Zhai, Jiang Qingsheng, Sun Pengfei, Mi Lei, Song Feihao, Zhu Zhenrong, and Liu Jun. Rong Jun, Zhang Zongjun, Qin Sibao, Chen Jiazhou, Chu Li, Yao Zhongbang, Li Ping, Wang Qiang, Xing Shigang, He Ping, Li Jingshan, Li Nan, Yang Bo, Chen Xiaotian Tang Yanyan. Time Division Multiple Access (TDMA) based on a 12.5kHz channel Compatibility testing of dedicated digital trunking communication systems

## 1 Scope

GB/T 46921-2025 is the Chinese national standard covering the conformance suite for TDMA trunked radio - every message, timer and state transition exercised against the specification, which is what makes a radio from one maker work on another's network. At 70,500 words it is the test suite rather than the specification. First edition, with GB/T 46923-2025 and GB/T 46922-2025. It was issued on 31 December 2025 and has been in force since 1 April 2026, as a first edition. The document is under the responsibility of the Ministry of Industry and Information Technology. This page is published from the official

record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the functional testing of various devices in a dedicated digital trunking communication system based on a 12.5kHz channel for Time Division Multiple Access (TDMA). The test environment, RF performance test requirements, and functional test requirements are described, along with the RF performance test methods, electromagnetic compatibility test methods, and air conditioning test methods. Methods for testing port functionality, security encryption functionality, and system interconnection. This document applies to the development, testing, and inspection of a dedicated digital trunking communication system based on a 12.5kHz channel for Time Division Multiple Access (TDMA). And quality evaluation.



## 2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 9254.1 Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers - Part

## 3 Terms and Definitions

The terms and definitions defined in GB/T 46923, GB/T 34991, GB/T 34992, GB/T 46919, and GB/T 46922, as well as the following terms and definitions. This applies to this document.

3.1 base station transceiver station In a radio communication system, there is a transmitter that converts baseband signals into radio frequency signals and a receiver that recovers radio frequency signals from the antenna feeder system.