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

GB/T 46998-2025

**Specification for the information exchange interface of road
traffic management based on vehicle-infrastructure cooperative
systems**

道路交通管理车路协同系统信息交互接口规范

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization - Part

1.Rules for the Structure and Drafting of Standardizing Documents. Please note some contents of this Document may involve patents. The issuing agency of this Document shall not assume the responsibility to identify these patents. This Document was proposed by Ministry of Public Security of the People's Republic of China. This Document shall be under the jurisdiction of Technical Committee on Traffic Management of Standardization Administration of China (SAC/TC 576). Drafting organizations of this Document. Research Institute of Traffic Management, Ministry of Public Security; SAIC Motor Corporation Limited; Jiangsu Green Intelligent Transportation Technology Co., Ltd.; Wuxi Checheng Zhilian Technology Co., Ltd.; China TransInfo Technology Co., Ltd.; Wuxi Huatong Intelligent

Transportation Technology Development Co., Ltd.; China Mobile Communications Group Co., Ltd.; AutoNavi Software Co., Ltd.; and NavInfo Co., Ltd. Chief drafting staffs of this Document. Xu Leng, Liu Dongbo, Zhang Ren, He Guangjin, Liu Chengsheng, Dou Rui, Jin Liming, Hua Xianping, Sun Yafu, Pan Weiping, Dong Zhenning, Qiu Fengcui, and Zhou Junhao. Specifications for Information Exchange Interface of Road Traffic Management Based on Vehicle-Infrastructure Cooperative System

1 Scope

GB/T 46998-2025 is the Chinese national standard covering what the roadside says to the vehicle and the vehicle back to the roadside - the signal phase and timing, the hazards and the road works, the vehicle's own position and intent, and the format and timing of each message. First edition, and it is the traffic management half of the connected vehicle standards published this year. It was issued on 31 December 2025 and has been in force since 1 July 2026, as a first edition. The document is under the responsibility of the Ministry of Public Security. 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 communication rules, interactive information, interface implementation, security requirements, and verification methods for information exchange between traffic control and information service platforms and vehicle-to-everything (V2X) application service platforms. This Document applies to the design, development, testing, and application of platforms related to road traffic management vehicle-road cooperative systems. NOTE. The term "vehicle-to-everything (V2X) application service platform" is a general term for various application service system platforms that provide services for intelligent connected vehicles, including cloud control infrastructure platforms, V2X data application service platforms, industry vehicle management platforms, vehicle manufacturer service platforms, and internet-based mobility service platforms.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB 5768.2-2022 Road traffic signs and markings - Part

3 Terms and Definitions

For the purposes of this Document, the terms and definitions given in GB/T 31418, GA/T

1788.1 and the following apply.

3.1 Traffic control and information service platform A central platform that gathers various information such as road traffic control, traffic flow, and traffic incidents; integrates functions such as traffic command, dispatch, control, and information dissemination; and provides information services. [Source: GA/T 1743-2020, 3.1]

4 Abbreviated Terms

The following abbreviated terms apply to this Document. GCJ-

02.The Chinese GCJ-

02 Geographic Coordinate System, also known as the "Mars Coordinate System". HTTP. Hyper Text Transfer Protocol HTTPS. Hyper Text Transfer Protocol over Secure Socket Layer JSON. JavaScript Object Notation MQTT. Message Queuing Telemetry Transport RESTful. Representational State Transfer UTC. Universal Time Coordinated UTF-8.8-bit Unicode Transformation Format V2X. Vehicle to Everything

5 Communication Rules

When the traffic control and information service platform and the vehicle-to-everything (V2X) application service platform exchange information, unless otherwise specified, all exchanged information shall be serialized using JSON and encoded in UTF-8.

16.4 Code for management information of road traffic - Part

4.Code of motor vehicle type GA/T 380 Coding rules for public security organs GA 408.1 Codes of traffic violation information - Part

1.Code of traffic violative action GA/T 543.5 The data elements for public security (5) GA/T 543.6 The data elements for public security (6) GA/T 543.9 The data elements for public security (9) GA/T 543.10 The data elements for public security (10) GA/T 1049.2-2024 Communication protocol for integrated road traffic command platform - Part

2.Traffic signal control system GA/T 1743-2020 Specifications for the information release interface of traffic signal controller GA/T 1788.1 Security technical requirements for video and image information system for public security - Part