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**Intelligent and Connected Vehicles—Technical
Requirements and Test Methods of Vehicle-Info
Operating System**
智能网联汽车 车载操作系统技术要求及试验方法
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FOREWORD

This document is drafted in accordance with the rules given in GB/T 1.1-2020 “*Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents*”.

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Intelligent and Connected Vehicles—Technical Requirements and Test Methods of Vehicle-Info Operating System

1 SCOPE

This document specifies the technical requirements for vehicle-info operating system (VIOS) and describes the corresponding test methods.

This document is applicable to the vehicles of Categories M and N equipped with a VIOS, while this document may be used as a reference for other vehicle categories.

2 NORMATIVE REFERENCES

The following normative documents contain provisions which, through normative reference in this text, constitute essential provision of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendment) applies.

GB/T 41388-2022 Information security technology—Trusted execution environment—Basic security specification

GB/T 44464-2024 General requirements of vehicle data

GB 44495-2024 Technical requirements for vehicle cybersecurity

GB 44496-2024 General technical requirements for software update of vehicles

3 TERMS AND DEFINITIONS

For the purposes of this document, the following terms and definitions apply.

3.1 Vehicle-info operating system (VIOS)

a collection of software that runs on the onboard information interactive system and instrument hardware, manages and controls the onboard software and hardware resources of the intelligent and connected vehicles (ICVs), and provides services for ICVs other than the implementation of driving automation function

[Source: GB/T 44373-2024, 5.15.2]

3.2 single system architecture

an architecture in which a single VIOS runs on a single set of hardware

3.3 multisystem architecture

an architecture in which more than one VIOS runs on a single set of hardware, and the multisystem isolation technical solution is implemented by using hardware isolation, hypervisor, container, or any combination thereof

3.4 resource abstraction

an approach of running on the VIOS kernel and providing hardware resource physical characteristics and interface content to the VIOS applications and basic services through creating software

3.5 thing model

a digital description of a thing, comprising a three-layer structure, i.e., element, component, and thing template

Note 1: Element primarily includes attributes, services (also known as behaviors or commands), and events.

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