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**Technical requirements and test methods for cyber
security of vehicle gateway**

汽车网关信息安全技术要求及试验方法

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Foreword

This Standard was 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”.

Attention is drawn to the possibility that some of the elements of this Standard may be the subject of patent rights. The issuing authority shall not be held responsible for identifying any or all such patent rights.

This Standard was proposed by Ministry of Industry and Information Technology of the People's Republic of China.

This Standard shall be under the jurisdiction of National Technical Committee on Automobiles of Standardization Administration of China (SAC/TC 114).

The drafting organizations of this Standard: Guangzhou Automobile Group Co., Ltd., China Automotive Technology and Research Center Co., Ltd., Pan Asia Automotive Technology Center Co., Ltd., SAIC Motor Technology Center, Beijing Automotive Research Institute Co., Ltd., Daimler Greater China Investment Co., Ltd., Geely Automobile Research Institute (Ningbo) Co., Ltd., Neusoft Group Co., Ltd., Chongqing Changan Automobile Co., Ltd., Dongfeng Motor Group Co., Ltd. Technology Center, Ministry of Transport Highway Research Institute.

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Technical requirements and test methods for cyber security of vehicle gateway

1 Scope

This Standard specifies cyber security technical requirements and test methods for vehicle gateway product hardware, communication, firmware, data.

This Standard is applicable to the design and implementation of cyber security of vehicle gateway products. It is also applicable to product testing, evaluation and management.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 25069, *Information security technology - Glossary*

GB/T 37935-2019, *Information security technology - Trusted computing specification - Trusted software base*

GB/T 40861, *General technical requirements for vehicle cybersecurity*

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in GB/T 25069, GB/T 37935-2019, GB/T 40861 as well as the followings apply.

3.1 vehicle gateway

an electronic control unit of which the main function is to safely and reliably forward and transmit data between multiple networks in the vehicle

NOTE 1: The vehicle gateway passes through the isolation between different networks and the conversion between different communication protocols. Information can be exchanged among the functional domains that share communication data.

NOTE 2: The vehicle gateway is also called central gateway.

3.2 backdoor

An aisle that can bypass the control of security mechanisms such as system authentication and enter the information system.

[Source: GB/T 40861-2021, 3.12]

3.3 entity of root of trust

A functional module that is used to support the establishment and transmission of the trust chain of the trusted computing platform that can provide external services such as integrity measurement, secure storage, and cryptographic computing.

NOTE: The entity of root of trust includes TPCM, TCM, TPM, and so on.

[Source: GB/T 37935-2019, 3.12]

4 Abbreviations

The following abbreviations apply to this Standard. ACL

Access Control Lists

ARP Address Resolution Protocol CAN

Controller Area Network

CAN-FD CAN with Flexible Data-rate

DLC Data Length Code

DoS Denial of Service

ECU Electronic Control Unit

ICMP Internet Control Message Protocol ID

标识符(Identifier)

IP Internet Protocol

JTAG Joint Test Action Group LIN

Local Interconnect Network MAC

Media Access Control