

ICS 03.120.20
CCS A 00

RB

**CERTIFICATION AND ACCREDITATION INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

RB/T 248-2026

**Automotive chip testing organizations-Guidelines for evaluation
of computing chip testing capability**

汽车芯片测试机构 计算芯片测试能力评价指南

(English Translation)

*Based on the 2025 public consultation draft. Free update to the final text upon
publication.*

Issued on: August 6, 2026

Implemented on: October 1, 2026

**Issued by: Certification and Accreditation Administration of the People's
Republic of China**

Table of Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 General requirements

5 Technical capability requirements

6 Evaluation process and management requirements

Annex A (normative) Computing power evaluation method for automotive chips

Annex B (informative) Example of an evaluation report

Foreword

Note on this edition: the English translation is based on the public consultation draft (2025) of this standard, the latest text in circulation. The final text issued by CNCA on 6 August 2026 has not yet been published in full; when it is, the translation is updated free of charge for buyers.

This document is one of the five standards of the automotive chip certification review series: RB/T 133 (general evaluation requirements), RB/T 134 (design organizations), RB/T 222 (certification bodies), RB/T 247 (testing organizations) and RB/T 248 (computing chip testing).

This document was drafted in accordance with the rules given in GB/T 1.1-2020.

This document was proposed by and is under the jurisdiction of CNCA. Drafting organizations: Certification and Accreditation Technology Research Center of SAMR; Certification Supervision Department of SAMR.

Introduction

With the rapid development of intelligent and connected vehicles, chip computing power has become a key indicator of vehicle performance. The industry generally relies on TOPS (tera operations per second) as a single indicator, which does not reflect the effective computing capability of a chip in complex scenarios and makes chip selection and industrial application difficult.

To build a scientific evaluation system, this document proposes a multi-dimensional evaluation method of basic computing power plus effective computing power, and

standardizes the test requirements and the capability of the organizations that carry out the evaluation, so that the results are true, reliable and traceable.

1 Scope

This document specifies the technical requirements, indicator system and evaluation method for evaluating the computing power of automotive chips.

This document is applicable to the capability admission conditions and certification review requirements of computing power evaluation and testing organizations and of computing chip design organizations.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition (including any amendments) applies.

GB/T 34590 Road vehicles - Functional safety · ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories · AEC-Q100 Failure mechanism based stress test qualification for integrated circuits

3 Terms and definitions

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

3.1 theoretical computing performance

theoretical computing performance reached by a chip in a standard test environment (e.g. 25 °C, nominal voltage) at a given computing precision (e.g. INT8/FP16/FP32), usually expressed in TOPS (tera operations per second) or FLOPS (floating-point operations per second)

3.2 effective computing power

computing efficiency actually available to a chip in real automotive application scenarios, measuring how efficiently it completes specific tasks such as object detection, path planning and control response, usually expressed as MAPS (Meaningful Automotive Performance Score)

3.3 computing power organization

professional organization with the corresponding technical qualifications that tests, certifies or evaluates the basic computing power (TOPS), effective computing power (MAPS),

energy efficiency and functional safety of automotive chips according to this document, including third-party testing bodies, laboratories of chip companies and research institutes

4 General requirements

4.1

Evaluation principles

Scientific (multi-dimensional evaluation combining theoretical computing power and scenario-based testing); impartial (test data recorded on a blockchain so that they cannot be altered); applicable (focus on performance in the application scenarios of Chinese new energy vehicles).

4.2

Technical framework

The evaluation process comprises indicator definition, testing, score calculation and grade certification (see Annex A).

4.3

Basic requirements for computing power organizations

Independent legal status or authorization by the legal entity; testing or certification qualifications relevant to computing power evaluation; a quality management system meeting GB/T 19001; core technical staff with at least 3 years of experience in automotive electronics, chip design or AI computing; a test environment meeting ISO/IEC 17025, high-precision computing power test equipment and automotive scenario simulation capability.