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**Road vehicles - Controller area network(CAN) - Part 1: Data link
layer and physical signalling**

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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.

This Document is Part 1 of GB/T 41588 Road Vehicles - Controller Area Network. GB/T 41588

has published the following parts.

- Part 1.Data Link Layer and Physical Signaling;
- Part 2.High-Speed Medium Access Unit;
- Part 3.Low-Speed Fault-Tolerant, Medium-Dependent Interface;
- Part 4.Time-Triggered Communication.

This Document equivalently adopts ISO 11898-1.2015 Road Vehicles - Controller Area Network (CAN) - Part 1.Data Link Layer and Physical Signaling.

This Document made the following editorial modifications.

- According to the requirements of GB/T 1.1, transfer the "Consistency" in Clause 2 to Clause 12 of ISO11898-1.2015;
- Add "ISO/IEC 8802-2" to the Normative References in Clause 2.

Please note some contents of this Document may involve patents. The issuing agency of this

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- Part 1.Data Link Layer and Physical Signaling

1 Scope

This Document specifies the characteristics of setting up an interchange of digital information

between modules implementing the CAN data link layer. Controller area network is a serial communication protocol, which supports distributed real-time control and multiplexing for use

within road vehicles and other control applications.

This Document specifies the Classical CAN frame format and the newly introduced CAN Flexible Data Rate Frame format. The Classical CAN frame format allows bit rates up to 1 Mbit/s and payloads up to 8 byte per frame. The Flexible Data Rate frame format allows bit rates higher than 1 Mbit/s and payloads longer than 8 byte per frame.

This Document describes the general architecture of CAN in terms of hierarchical layers according to the ISO reference model for open systems interconnection (OSI) according to ISO/IEC 7498-1.The CAN data link layer is specified according to ISO/IEC 8802-2 and ISO/IEC 8802-3.

This Document contains detailed specifications of the following (see Figure 2).

- logical link control sub-layer;
- medium access control sub-layer;