



**ISO 11898-2**

**Road vehicles — Controller area network (CAN) —**

Part 2:  
**High-speed physical medium attachment (PMA) sublayer**

*Véhicules routiers — Gestionnaire de réseau de communication (CAN) —*

*Partie 2: Sous-couche de l'unité d'accès au support à haute vitesse (PMA)*

**Fourth edition  
2026-05**

This is a preview of ISO 11898-2:2026. Click [here](#) to purchase the full version from the ANSI store.



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2026

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

This is a preview of ISO 11898-2:2026. [Click here to purchase the full version from the ANSI store.](#)

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Abbreviated terms</b> .....	<b>3</b>
<b>5 HS-PMA function</b> .....	<b>4</b>
5.1 Base requirements.....	4
5.2 HS-PMA test circuit.....	4
5.3 Static parameter.....	5
5.3.1 Maximum ratings of $V_{CAN\_H}$ , $V_{CAN\_L}$ and $V_{Diff}$ .....	5
5.3.2 Recessive output characteristics, bus biasing active.....	5
5.3.3 Recessive output characteristics, bus biasing inactive.....	6
5.3.4 Dominant output characteristics.....	6
5.3.5 Maximum driver output current.....	8
5.3.6 PMA static receiver input characteristics, bus biasing active and inactive.....	8
5.3.7 Receiver input resistance.....	9
5.3.8 Maximum leakage currents of CAN_H and CAN_L.....	10
5.4 Dynamic parameter.....	10
5.4.1 Driver symmetry.....	10
5.4.2 Optional transmit dominant timeout.....	11
5.4.3 Transmitter and receiver timing behaviour.....	11
5.5 Wake-up from low-power mode.....	15
5.5.1 Wake-up procedures.....	15
5.5.2 General requirement.....	15
5.5.3 Basic wake-up.....	15
5.5.4 Via wake-up pattern.....	15
5.5.5 Selective wake-up.....	19
5.5.6 Bus biasing procedure.....	24
<b>6 Conformance</b> .....	<b>26</b>
<b>Annex A (normative) HS-PMA with SIC mode and FAST mode</b> .....	<b>27</b>
<b>Annex B (informative) ECU and network design</b> .....	<b>54</b>
<b>Annex C (informative) PN physical layer modes</b> .....	<b>60</b>
<b>Bibliography</b> .....	<b>61</b>

This is a preview of ISO 11898-2:2026. [Click here to purchase the full version from the ANSI store.](#)

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 31, *Data communication*.

This fourth edition cancels and replaces the third edition (ISO 11898-2:2024), which has been technically revised.

The main changes are as follows:

- bugs have been fixed, clarifications have been made and figures have been updated;
- the common mode range specification of the receiver has become extended towards +/- 8 V differential (see [Table 7](#)).

A list of all parts in the ISO 11898 series can be found on the ISO website.

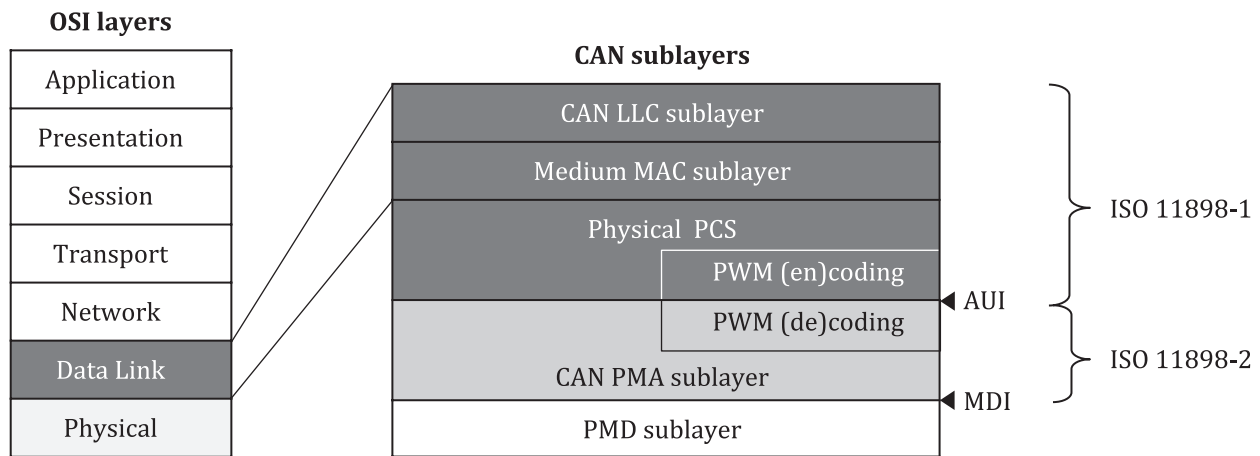
Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

This is a preview of ISO 11898-2:2026. [Click here to purchase the full version from the ANSI store.](#)

The ISO 11898 series provides requirement specifications for the CAN data link layer and physical layer. It is intended for chip implementers, e.g. ISO 11898-1 for CAN protocol controllers and this document for CAN transceivers. Related conformance test plans are given in the ISO 16845 series. The CAN data link layer models the open system interconnect (OSI) data link layer; it is internally subdivided into logic link control (LLC) and medium access control (MAC). ISO 11898-1 also specifies the CAN physical coding sublayer (PCS) by means of the attachment unit interface (AUI). Optionally, the PCS also provides the pulse-width modulation (PWM) encoding to be linked to a CAN SIC XL transceiver, which provides the PWM decoding.

The OSI layers above the data link layer (e.g. the network layer) are not specified in the ISO 11898 series.

[Figure 1](#) shows the relation between the OSI layers and the CAN sublayers.



**Key**

- AUI attachment unit interface
- LLC logic link control
- MAC medium access control
- MDI medium dependent interface
- PCS physical coding sublayer
- PMA physical medium attachment
- PMD physical medium dependent
- PWM pulse-width modulation

**Figure 1 — CAN data link and physical sublayers relation to the OSI model**