

# Mecel USBtoCAN

## CAN adapter for PC

### INTRODUCTION

USBtoCAN is a CAN adapter for the USB port on a PC. It is an easy way to connect a PC to the CAN bus. With USBtoCAN you get use of all the advantages of the Universal Serial Bus such as real Plug & Play and the ability to connect several USBtoCAN adapters to the same PC.

USBtoCAN is built around the powerful Philips SJA1000 CAN-controller which gives you unique functions for vehicle diagnosis. You can make use of all the features and functions of the SJA1000 CAN-controller including transfer rates up to 1 Mbit/s. USBtoCAN supports both standard 11-bit CAN identifiers and extended 29-bit CAN identifiers. The ISO 11898-2 high speed physical interface is implemented on board with a Philips TJA1050 transceiver. (Other physical interfaces, e.g. Philips TJA1054 or AU5790 are also available.) It delivers improved system performance, with both BasicCAN mode and an extended mode supporting enhanced system diagnosis and optimisation functions.

Diagnostic facilities include Error Analysis Functions, with readable counters providing information about the performance of individual nodes or the entire system; and Arbitration Lost Capture facility, which allows monitoring of each lost CAN bus access in more detail.

Listen-Only mode allows the USBtoCAN to receive messages without giving an acknowledgement or generating error frames. A single-shot feature allows the USBtoCAN adapter to determine whether a message should be re-transmitted or not in case of a failed transmission. □□□

### FEATURES

- CAN communication from a PC via the Universal Serial Bus
- Plug & Play makes it easy to connect to all PCs with USB ports



- Supports standard 11-bit CAN identifiers and extended 29-bit CAN identifiers
- Saves development time when the same software drivers can be used on all types of PC:s
- Automatic Bit Rate detection up to 1 Mbit/s transfer rate
- Listen only mode acts like a true "spy" on the CAN-bus
- Multiple USBtoCAN adapters can be connected
- Time stamp with 1  $\mu$ s resolution
- RAM-based firmware downloaded during plug & play start-up
- USB type A-B 1,8 meter cable included

### SOFTWARE SUPPORT

USBtoCAN is supported with device driver for:

- Windows XP
- Windows 2000
- Windows 98

Application examples:

- Microsoft Visual C++
- Microsoft Visual Basic

All device drivers and application examples are available for download from [www.mecel.se](http://www.mecel.se)

### USBtoCAN



USBtoCAN connector view



OBD II/EODB CAN cable

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## ABOUT MECEL

We are a system and software house focused on applications for vehicles and combustion engines, started in 1982.

Mecel is a subsidiary of Delphi Automotive Systems.

Our main customers are manufacturers of vehicles and combustion engines and their suppliers.

Mecel has operations in Åmål and Göteborg, Sweden. We mainly operate in Europe and North America, and are divided into two business areas:

- Engine Systems
- Automotive Systems

## About Automotive Systems

Since 1986, we are pioneers in developing efficient and robust distributed automotive systems.

We develop systems and software for both in-vehicle systems and off-board applications.

To enable remote connectivity to various vehicles, we also create sophisticated off-board services.

Mecel has long experience from telematics and infotainment, and is recognised as a leader in automotive Bluetooth applications. □□□

## CONTACT US

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## TECHNICAL SPECIFICATION

<b>Housing:</b>	80 x 55 x 28 mm aluminum box (3.1 x 2.2 x 2.2 Inch)
<b>Power supply:</b>	Powered by the PC (1.8 meter USB Type A-B cable is included)
<b>Connectors:</b>	USB type B - USB DSUB 9 - CAN-bus
<b>CAN protocol:</b>	ISO 11898-1
<b>CAN controller:</b>	Philips SJA1000
<b>CAN bus interface:</b>	ISO 11898-2 high speed physical interface with Philips TJA1050 transceiver Maximum baud rate 1 Mbit/s ISO 11898-3 low speed dual/single wire fault tolerant physical interface with Philips TJA1054 transceiver Maximum baud rate 125 kbit/s SAE J2411 (GM) single wire physical interface with Philips AU5790 transceiver Maximum baud rate 33(83) kbit/s
<b>Time stamp:</b>	1 µs resolution on receive frames
<b>Options:</b>	
<b>OBD II/EOBD CAN Cable:</b>	Cable for CAN according to ISO 15031-3/ SAE J1962 specifications. 4 wires connected: CAN H, CAN L, Vbat, GND

## ORDER INFORMATION

### Part number with description:

7906-201-100 USBtoCAN, ISO High speed with TJA1050 transceiver

7906-201-101 USBtoCAN, ISO Low speed dual/single wire fault tolerant TJA1054 transceiver

7906-201-102 USBtoCAN, SAE (GM) single wire CAN

7901-108-001 OBD II/EOBD CAN cable, 2.5 meter