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# **CANcard2**

## **Hardware User Manual**

Part number: CANcard2

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# 1 Installation

To properly install the CANcard2 in your PC, please follow the instructions detailed in the next sections.

## 1.1 System requirements

To run the CANcard2 on a PC, the PC must meet the following requirements:

- free PCMCIA Slot according to Release 2.1 Type II or Type III
- Windows7 (32 or 64 bit version), Windows Vista or Windows XP installed

## 1.2 Software installation

The CANcard2 software is part of the "CAN Drivers and Software" CD which is also available from the download section at [www.softing.com](http://www.softing.com).

- Insert the CD in your PC's CD/DVD drive.
- Run *CANDriversAndSoftware32.exe* for 32 bit systems or *CANDriversAndSoftware64.exe* for 64 bit systems. This will start the Setup procedure.
- Please follow the instructions given by the setup software.



### NOTE:

**Make sure to install the software b e f o r e you install your CANcard2 hardware for the first time.**

## 1.3 Mechanical installation

The CANcard2 is simply plugged into the PCMCIA slot as shown in Figure 1.

To eject it push the eject button carefully.

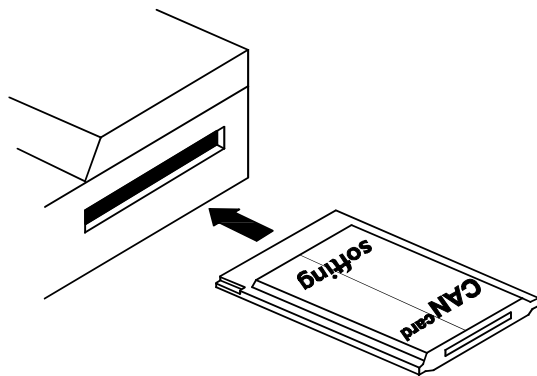


Figure 1: Inserting CANcard2 into the PCMCIA slot

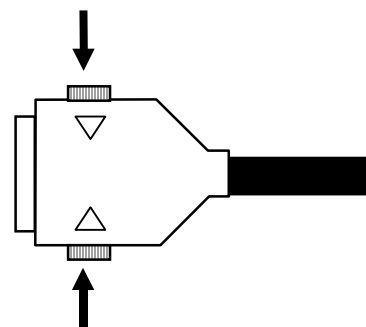


Figure 2: Removing of the adapter cable

If you want to connect your PC to a CAN network you have to connect the CANcard2 to the I/O adapter cable which is part of package. The male connector on the card side of the adapter cable is coded to prevent wrong insertions. Please do not force the male connector into the female connector of the CANcard2.

### WARNING:

**Do not pull the connected adapter cable because mechanical force will possibly damage the CANcard2.**

To remove the adapter cable from the CANcard2 you have to push the two buttons at the side of the connector as shown in Figure 2.

## 1.4 Driver configuration

CANcard2 is recognized by the driver automatically. Nothing more is usually required. However, advanced configuration – like changing the name of a CAN channel or setting a default baudrate - is possible with the Softing CAN Interface Manager.

- Click *Start – All Programs – Softing CAN – Runtime System Configuration – Softing CAN Interface Manager*
- For more details on the driver configuration click  
*Start – All Programs – Softing CAN – Runtime System Configuration – SCIM Manual*

## 2 Pin Assignment

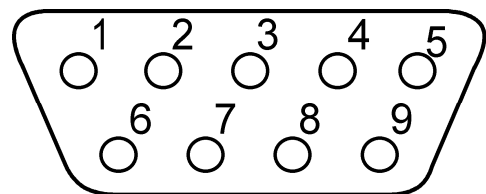
The CANcard2 is delivered together with a double D-Sub-9 adapter cable. Depending on the adapter cable type it provides connection to the CAN bus conforming either to

- CAN Highspeed Bus (ISO 11898-2) or
- CAN Lowspeed Bus (ISO 11519).

Three different adapter cable types are available for the CANcard2:

| Adapter Cable Types               | CAN Channel 1 Interface | CAN Channel 2 Interface |
|-----------------------------------|-------------------------|-------------------------|
| Double Highs Speed Cable (DHSC)   | CAN High Speed Bus      | CAN High Speed Bus      |
| High Speed/Low Speed Cable (HLSC) | CAN High Speed Bus      | CAN Low Speed Bus       |
| Double Low Speed Cable (DLSC)     | CAN Low Speed Bus       | CAN Low Speed Bus       |

| Pin | Signal  |
|-----|---|
| 1   | N.C.  |
| 2   | CAN_L   |
| 3   | GND   |
| 4   | N.C.  |
| 5   | Drain   |
| 6   | GND   |
| 7   | CAN_H   |
| 8   | N.C.  |
| 9   | KL30 (pos. car supply voltage, max.32V);<br>(only for CAN Lowspeed adapter) |



*Pinning of the 9-pin D-Sub connector*

The **CAN High Speed Bus** must be terminated at both ends with a termination resistance of 124Ω for proper operation. This is generally accomplished externally.

### 3 CE Information

This device complies with the requirements of the EC directive 2004/108/EC "Electromagnetic Compatibility" (EMC directive).



- Emission: EN55022 Class A (ITE Product Standard)
- Immunity: EN61000-6-2 Generic Immunity Standard (industrial environments)

A "Declaration of Conformity" in accordance with the above standards has been made and is filed at Softing Industrial Automation GmbH, Germany.

**NOTE:**

- To satisfy the EMC requirements, the equipment used (PC, monitor, PROFIBUS stations, etc.) also has to meet the EMC requirements. A shielded cable must be used. The shield of the bus cable must be connected to the metal shell of the adapter cable connector. The cable shield is connected to the CANcard2 chassis but not to signal GND internally. If only one CAN channel is connected to a network the other open connector has to be covered by the plastic dust cap to reduce electromagnetic emission.

**Warning!** This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### 4 RoHS Information

CANcard2 is RoHS compliant.



### 5 Technical data

|                     |  |
|---------------------|--|
| Unit:               | 16-bit PC Card (PCMCIA), Type II   |
| CPU:                | Infineon SAB-C165  |
| Memory:             | 256 Kbyte SRAM, 2 Kbyte dual-port RAM  |
| Supported PC IRQs:  | controlled by the operating system   |
| Physical interface: | Adapter cable according to CAN High Speed Specification<br>(alternative CAN Low Speed adapter available) |
| Connector:          | Sub-D 9-pin connector according to CIA DS102   |
| Baude rate:         | 10 kbit/s up to 1 Mbit/s   |
| Power supply:       | +5V ( $\pm 5\%$ ); max. 350mA by the PC  |
| Temperature range:  | Operation: 0 °C ... 55 °C (typ. PC ambient)<br>Storage: -20°C ... 70 °C                                  |
| Relative humidity:  | < 90% (non-condensing)   |