Connect CAN, CAN FD-, CANopen, DeviceNet and SAE J1939 systems to your PC

PC/CAN Interfaces

Connect CAN, CAN FD-, CANopen, DeviceNet and SAE J1939 systems to your PC
The IXXAT PC/CAN interfaces enable PC applications to access CAN networks with a uniquely variety of different PC interface standards. You select the PC/CAN interface that suits your application, performance requirements or required unit costs.

Various variants and interfaces

IXXAT CAN interfaces are – depending on the variant – modularly designed and can be equipped with up to four CAN high-speed channels as well for automotive use with CAN low-speed and LIN channels. For fast networks, the CAN interfaces are also available with up to two CAN FD channels. In addition, the interfaces can be galvanically isolated to protect both the interface and the PC system.

Besides a wide range of supported PC interface standards, from plug-in cards for e.g. PCI, PCIe, PCIe Mini, PMC, PCIe 104 to USB, Bluetooth and Ethernet, there are also PC interfaces in low-cost passive or active variants with powerful on-board controllers.

Active PC interfaces allow usage within applications with high demands on data pre-processing, such as high-precision time stamps or the active filtering of messages to be sent or received directly on the interface.

In addition to custom applications, the CAN interfaces are also basis for our extensive tool chain – consisting of analysis and configuration tools – as well as configuration software from a wide variety of equipment manufacturers.
Powerful driver packages for Windows and real-time operating systems

Despite the variety of different PC/CAN interfaces, all interfaces can be operated with the hardware-independent drivers for Windows (VCI) and real-time operating systems (ECI) by using a uniform programming interface.

Switching between the PC/CAN interfaces type is very easy and can be made without changes to your application. Thus, you are already well prepared for future technologies.

Windows

The “Virtual Communication Interface” (VCI) is designed as a system server and allows simultaneous access by several applications to one or more CAN controllers of one or more PC interfaces. Moving all important functions to the kernel optimizes the real-time compatibility of the VCI driver substantially.

### Technical data

<table>
<thead>
<tr>
<th>Product</th>
<th>CAN-IB100 /PCIe</th>
<th>CAN-IB200 /PCIe</th>
<th>CAN-IB300 /PCIe</th>
<th>CAN-IB400 /PCIe</th>
<th>CAN-IB500 /PCIe</th>
<th>CAN-IB600 /PCIe</th>
<th>CAN-IB120 /PCIe Mini</th>
<th>PC-I 04 /PCI</th>
<th>iPC-I XC16 /PCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC interface standard</td>
<td>PCI express (V1.1)</td>
<td>PCI express (V1.1)</td>
<td>PCI express (V1.1)</td>
<td>PCI express (V1.1)</td>
<td>PCI mini card (V1.2)</td>
<td>PCI mini card (V1.2)</td>
<td>PCI mini card (V1.2)</td>
<td>PCI (V2.1)</td>
<td>PCI (V2.2)</td>
</tr>
<tr>
<td>Fieldbus interfaces</td>
<td>1-4 x CAN</td>
<td>1-4 x CAN</td>
<td>1-4 x CAN</td>
<td>1-4 x CAN</td>
<td>1 x CAN</td>
<td>1 x CAN</td>
<td>1-2 x CAN</td>
<td>1 / 2 x CAN</td>
<td>1 / 2 x CAN</td>
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<tr>
<td>CAN interface</td>
<td>CAN 2.0 A/B</td>
<td>CAN 2.0 A/B</td>
<td>CAN 2.0 A/B</td>
<td>CAN 2.0 A/B</td>
<td>CAN 2.0 A/B</td>
<td>CAN 2.0 A/B</td>
<td>CAN 2.0 A/B</td>
<td>CAN 2.0 A/B</td>
<td>CAN 2.0 A/B</td>
</tr>
<tr>
<td>CAN connection</td>
<td>Sub D9 plug according to CIA 303-1</td>
<td>Sub D9 plug according to CIA 303-1</td>
<td>Sub D9 plug according to CIA 303-1</td>
<td>Sub D9 plug according to CIA 303-1</td>
<td>Connection cable with open ends</td>
<td>Sub D9 plug according to CIA 303-1</td>
<td>Sub D9 plug according to CIA 303-1</td>
<td>Sub D9 plug according to CIA 303-1</td>
<td>Sub D9 plug according to CIA 303-1</td>
</tr>
<tr>
<td>Galvanic isolation</td>
<td>optional (1 kV, 1 sec.)</td>
<td>optional (1 kV, 1 sec.)</td>
<td>yes (1 kV, 1 sec.)</td>
<td>optional (1 kV, 1 sec.)</td>
<td>optional (1 kV, 1 sec.)</td>
<td>optional (1 kV, 1 sec.)</td>
<td>optional (1 kV, 1 sec.)</td>
<td>optional (1 kV, 1 sec.)</td>
<td>optional (1 kV, 1 sec.)</td>
</tr>
<tr>
<td>Temperature range</td>
<td>0 °C ... +70 °C</td>
<td>0 °C ... +70 °C</td>
<td>0 °C ... +70 °C</td>
<td>-40 °C ... +85 °C</td>
<td>-20 °C ... +70 °C</td>
<td>-20 °C ... +70 °C</td>
<td>-20 °C ... +70 °C</td>
<td>-20 °C ... +70 °C</td>
<td>-20 °C ... +70 °C</td>
</tr>
<tr>
<td>Power supply</td>
<td>3.3 V DC, 350 mA typ.</td>
<td>3.3 V DC, 390 mA typ.</td>
<td>5 V DC, 100 mA typ. and 3.3 V DC, 100 mA typ.</td>
<td>5 V DC, 100 mA typ. and 3.3 V DC, 500 mA typ.</td>
<td>3.3 V DC, 380 mA typ.</td>
<td>3.3 V DC, 400 mA typ.</td>
<td>3.3 V DC, 300 mA typ.</td>
<td>5 V DC, 100 mA typ. + 3.3 V DC, 185 mA typ.</td>
<td>5 V DC, 185 mA typ.</td>
</tr>
<tr>
<td>Dimensions</td>
<td>approx. 65 x 105 mm</td>
<td>approx. 65 x 120 mm</td>
<td>approx. 65 x 105 mm</td>
<td>approx. 65 x 105 mm</td>
<td>approx. 95 x 125 mm</td>
<td>approx. 95 x 125 mm</td>
<td>approx. 123 x 90 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order number</td>
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<td>1.01.0232.xxxxx</td>
<td>1.01.0233.xxxxx</td>
<td>1.01.0234.xxxxx</td>
<td>1.01.0235.xxxxx</td>
<td>1.01.0236.xxxxx</td>
<td>1.01.0237.xxxxx</td>
<td>1.01.0238.xxxxx</td>
<td>1.01.0239.xxxxx</td>
</tr>
</tbody>
</table>

The VCI CAN driver is available for 32 and 64 bit Windows operating systems and also includes a simple CAN bus monitor “miniMon”, which enables the transmission and reception of CAN messages.

### VCI application interface:

- C-API
- .NET-API
- JAVA-API
- LabView-API

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**CAN bus monitor “miniMon”**

The “Virtual Communication Interface” (VCI) is designed as a system server and allows simultaneous access by several applications to one or more CAN controllers of one or more PC interfaces. Moving all important functions to the kernel optimizes the real-time compatibility of the VCI driver substantially.
- DasyLab (contains drivers for IXXAT interfaces)
- LabWindows

Linux, INtime, RTX, QNX and VxWorks
For use of the CAN interfaces under Linux and in real-time environments (INtime, RTX, QNX, VxWorks), IXXAT provides the universal “Embedded Communication Interface” driver (ECI) free of charge together with an interface. The application interface is designed as a “ANSI-C” interface and contains all necessary functions for CAN-based applications.

CANopen and SAE J1939 APIs
For use of the CAN interfaces under CANopen and J1939, IXXAT offers driver APIs that provide all protocol-specific functions and thus enable quick and easy development of PC-based control and configuration applications.
With a wide range of CAN interfaces we offer the right solution for your application.

Christian Schlegel
IXXAT, Managing Director
HMS Industrial Networks

IXXAT CAN interfaces from HMS Industrial Networks enable the best possible connection of PC systems to CAN based networks. Through the use of precisely matching solutions – selected from our large hardware portfolio – and the corresponding software packages available at HMS, our customers gain a competitive advantage. HMS’ knowledgeable staff along with distributors and partners in over 50 countries worldwide, are there to help you and your business increase productivity and performance while lowering cost and time to market.

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