

CAN/CANopen/ DeviceNet Interface Boards

Active Interface Boards
for Every Application

Your Requirement

You need to quickly and easily connect your PCs to CAN, CANopen or DeviceNet. And you want to support the latest standards – while achieving the highest performance at the best price.

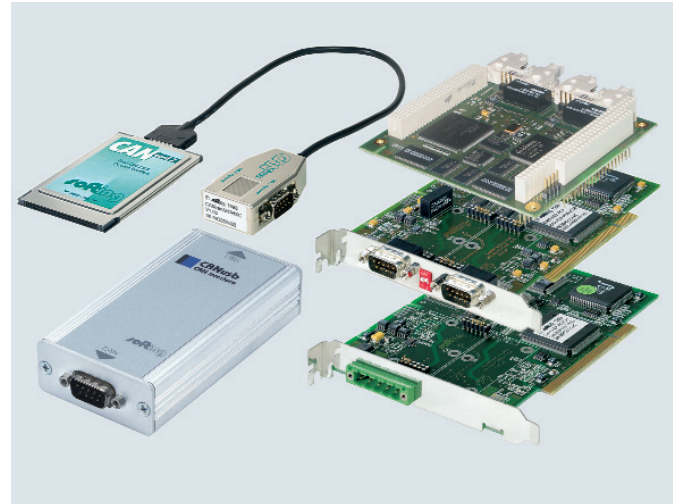
Our Solution

Softing offers CAN, CANopen and DeviceNet interface boards for a wide range of applications - from fast and compact controls, to analysis tools, parameterization tools and visualization PCs, through to customized specialty applications.

The Right Board for You

The CAN API included with the product provides access to any CAN data - either sequentially buffered or as a current process image. Firmware is available for CANopen and DeviceNet which processes the protocol in real-time directly on the card and independent of the PC. For less time-critical applications, Lean-CANopen provides a free, fully operational CANopen interface.

Product Information



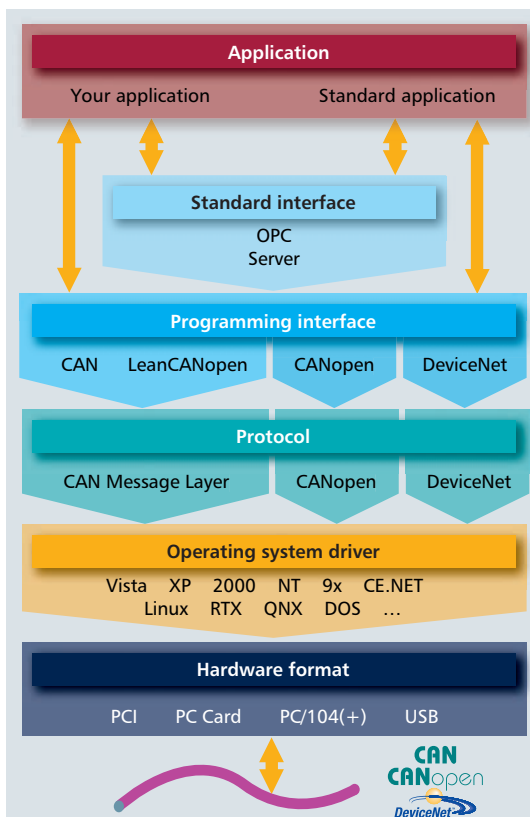
Whichever protocol version you need: choose the ideal option from a variety of hardware formats, operating system drivers, protocols and application interfaces.

Your Benefits

- Common programming interface for all hardware formats
- Top performance through onboard microcontrollers
- Local buffering and preprocessing to ease the workload of the PC
- Fast integration thanks to a simple user interface that is customized to fit the protocol
- Software drivers for a wide range of operating systems
- Numerous sample applications for various development environments and programming languages
- Customer-specific adaptations for optimal integration in your target system
- Engineering services to assist during integration

Our Experience

Benefit from our extensive experience with fieldbus systems and our large install-base. Softing is an independent company and a leader in providing key technology components to manufacturers of fieldbus devices. We actively participate in all major fieldbus standard working groups and take pride in continually improving our offer to meet new requirements. At the same time we ensure backwards compatibility so your investment with us includes the opportunity to enhance your existing product with the latest technology.



Flexible integration of interface boards in your application



| CAN protocol and available APIs | PCI (single channel) | PCI (dual channel) | PCI (single channel) DeviceNet | PC/104plus (single channel) | PC/104plus (dual channel) | PC/104plus (dual channel) extended Temperature range |
|--|-------------------------------------|--------------------|-----------------------------------|---------------------------------------|---------------------------------------|---|
| CAN V2.0 (11/29 bit IDs) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| CAN-API | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| LeanCANopen-API ¹⁾ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| CANopen-API ²⁾ | ✓ | ✓ | ✓ | - | - | - |
| DeviceNet-API ³⁾ | - | - | ✓ | - | - | - |
| CAN bus connection | | | | | | |
| Connector | 9 pin D-Sub male | 9 pin D-Sub male | 5 pin Open Style | 9 pin D-Sub male on a ribbon cable | 9 pin D-Sub male on a ribbon cable | 9 pin D-Sub male on a ribbon cable |
| # of channels | 1 | 2 | 1 | 1 | 2 | 2 |
| Galvanically isolated | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Controller | SJA1000 | | | TwinCAN | | |
| Physical layer | ISO 11898-2 (CAN High-Speed) | | | | | |
| Supports different physical layers | ISO 11898-3 (low speed), piggy-back | | - | ISO 11898-3 (low speed), on request | | |
| PC Interface | | | | | | |
| Interface | PCI | PCI | PCI | PC/104plus (PCI) | PC/104plus (PCI) | PC/104plus (PCI) |
| Dual-Port-Memory | 4 kbyte | | | 512 kbyte | | |
| Interrupts | Plug and Play | | | | | |
| Environment / Dimensions | | | | | | |
| Operating temperature | 0 °C .. +55 °C | | | | | -25 °C .. +75 °C |
| Storage temperature | -20 °C .. +70 °C | | | | | -25 °C .. +75 °C |
| Relative humidity | < 90%, non-condensing | | | | | |
| Dimensions [mm] | 160 x 100 | | | 90,2 x 98 | | |
| Power supply | | | | | | |
| Supply voltage | 5V (± 5%) DC | | | 5V / 3,3V (± 5%) DC | | |
| Current consumption [mA] | typ. 380 | typ. 410 | typ. 340 | typ. 300 / 150 | typ. 350 / 150 | typ. 350 / 150 |
| Certificates | | | | | | |
| CE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| FCC | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Drivers available for ⁴⁾ | | | | | | |
| Win Vista32 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Win 2000/XP | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Win NT 4.0 | ✓ | ✓ | ✓ | - | - | - |
| Win 95/98/ME | ✓ | ✓ | ✓ | - | - | - |
| Win CE .NET 4.0, 4.1, 4.2 | ✓ | ✓ | - | - | - | - |
| Win CE .NET 5.0 | ✓ | ✓ | - | - | - | - |
| Linux 2.4, 2.6 | ✓ | ✓ | - | ✓*) | ✓*) | ✓*) |
| QNX | - | - | - | - | - | - |
| Ardence RTX | ✓ | ✓ | ✓ | - | - | - |
| MS-DOS | - | - | - | - | - | - |
| Part number | CAN-AC1-PCI | CAN-AC2-PCI | CAN-AC1-PCI/DN | CAN-PRO1-PC104+ | CAN-PRO2-PC104+ | CAN-PRO2-PC104+XT |

¹⁾ LeanCANopen is a CANopen master implementation that runs on the PC on top of a CAN interface board. It supports single channel and dual channel boards.

³⁾ The DeviceNet API is interfacing with a DeviceNet master and slave protocol stack that is executed directly on the interface board. The DeviceNet API communicates over channel 1 only (the second channel on a dual channel board is not used!)

*) in preparation

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Product Information

**CAN/CANopen/DeviceNet Interface Boards:
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Supplemental Software Products for Softing CAN Boards

Our CAN interface boards work with a wide variety of software interfaces and standard applications, such as:

- Protocol APIs
- OPC servers for CANopen
- CAN Bus Analyzer with various options
- CANopen Configurator

The following table provides an overview of the availability of individual products and their order numbers.

Always the right solution

CAN interfaces from Softing are being used successfully in many industry sectors:

- Mechanical engineering
 - Medical technology
 - Drive technology
 - Robotics
 - Packaging machines
 - Automotive engineering
 - Railway technology
 - Traffic control
 - Electronics development
 - Measurement technology
 - Simulation technology
 - Research
- and many more

| Order number for accessories | Protokoll APIs | | | OPC Server | Bus Analyzer | | Configurator |
|---------------------------------|-------------------------------------|---------------------------------------|--------------------------------------|--|----------------------------|----------------------------------|---|
| | CANopen per protocol firmware | DeviceNet per protocol firmware | CANopen PC-based (LeanCANopen) | CANopen OPC server with configurator | X-Analyser full version | X-Analyser economy version | CANopen configuration/ project planning tool |
| PCI | CAN-OPN/API | – | free ¹⁾ | OPC-CANOPEN | X-ANALYSER | X-ANALYSER-ECO | CAN-CON/OPN |
| PCI DeviceNet | – | CAN-DN/API | – | – | X-ANALYSER | X-ANALYSER-ECO | – |
| PC/104plus | – | – | free ¹⁾ | OPC-CANOPEN ²⁾ | – | – | – |
| PC/104 | CAN-OPN/API | – | free ¹⁾ | OPC-CANOPEN | X-ANALYSER | X-ANALYSER-ECO | CAN-CON/OPN |
| PC/104 DeviceNet | – | CAN-DN/API | – | – | X-ANALYSER | X-ANALYSER-ECO | – |
| PC Card | CAN-OPN/API | CAN-DN/API | free ¹⁾ | OPC-CANOPEN | X-ANALYSER | X-ANALYSER-ECO | CAN-CON/OPN |
| USB | – | – | free ¹⁾ | OPC-CANOPEN ²⁾ | X-ANALYSER | X-ANALYSER-ECO | CAN-CON/OPN |

¹⁾ download from www.softing.com ²⁾ in preparation



Additional accessories

Assembly kit and strain relief for the PC card interface slot (increases mechanical stability)

Order number

PCCARD2-PFX