



CAN Plug-In board CPC-PCle

Special Features

- Passive CAN interface for PCIe x1 slots
- One or two CAN controllers NXP SJA1000
- Optional galvanic separation of CAN controller to PC
- Optional galvanic separation between CAN channels
- Supports 11 bit frames and 29 bit frames
- Development kits for Windows 2000/XP/Vista and Linux available

Description

CPC-PCle is a passive CAN plug-in board for PCIe x1 slots. CPC-PCle was designed for industrial series application and has a robust and cost efficient construction. CPC-PCle supports either one or two CAN channels that can be operated independantly with different data rates. The interface comes with the NXP CAN controller SJA1000, that offers good diagnostic attributes.

CPC-PCle maps the CAN controller(s) directly in the address space of the PC and allows access of the CAN messages with low latencies. Existing software for the supported CAN controller can easily be adapted. The CAN communication with CPC-PCle may be handled either in interrupt controlled mode or in polled mode, interrupt channels are assigned automatically (Plug & Play).

Optionally, CPC-PCle is available with galvanic separation between PC and CAN bus. A galvanic separation between the CAN channels is also possible by separate DC/DC converters.

Technical Data

Bus Interface

Pin assignment	Connector D-Sub 9, complying to CiA DS-102
Type of the physical connection	ISO 11898 / Transceiver PCA82C251
Maximum voltage on bus pins	±30V referring to bus ground
Isolation volatage with galvanic separation	±1000V DC

Configuration

Ressource	Parameter
PC address space	Automatic Assignment (Plug & Play)
Interrupt	Automatic Assignment (Plug & Play)

Programming Interface

Configuration and CAN communication with CPC-PCIe are done by accesses to the memory address area of the PC. The appropriate data areas are mapped by CPC-PCIe and „plug&play” software into the memory address space. Due to the direct access to the CAN controllers the CAN communication takes place with low latency time

The memory used by CPC-PCIe is divided in several sections. The control registers allow the detection of the interface type similiar to the interfaces CPC-Card, CPC-XT and CPC-104 and the generation of hardware resets for the CAN controllers. The access to the CAN controllers occurs via a separate memory space for each interface. In these memory spaces, the sending and receiving buffers as well as the control registers of the CAN controller are accessible.

A specification describing the access of the CAN controllers and drivers for Windows and Linux are available separately.

Scope of Delivery

- Plug In board CPC-PCIe
- User Manual
- proCANtool CAN-Monitor for operating system Windows 2000/XP/Vista