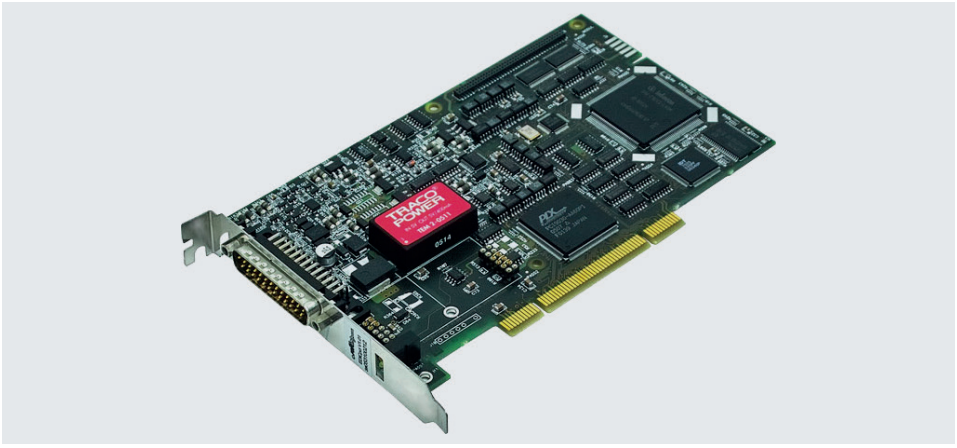
optimize! softing

EDICpci

Multibus PCI Interface for Vehicle Electronics

Diagnostic interfaces from Softing are based on the tried and tested EDIC® hardware and software platform. EDICpci is a versatile interface and is perfect for use in stationary applications thanks to its high-performing and integrated connection to the PC via the PCI bus.



Areas of Application

- Simulation
- Test/validation
- Manufacturing
- Fast and reliable flash programming
- Gateway tests (shared time base for CAN and ISO 9141/LIN)

Advantages

- 3 independent channels: 2 x CAN and 1 x ISO 9141/LIN
- Data preprocessing and protocol handling in the interface
- Intelligent data buffering for parallel communication channels
- Galvanic isolation for simple use in the manufacturing environment

Protocol Handling in the Interface

The vehicle protocols are handled directly in the interface. This ensures fast response times and reliable real-time behavior regardless of the PC operating system. Extensive buffer mechanisms make parallel operation of several communication channels possible.

Software Interfaces

The communication protocols UDS (ISO 14229) and KWP 2000 (ISO 14230, ISO 15765) as well as many OEM-specific protocols are supported via the standardized D-PDU API (ISO 22900-2). With a software layer based on the D-PDU API, the VCI can also be used as a PassThru device in accordance with SAE J2534. Together with the Diagnostic Tool Set DTS from Softing, a total solution in accordance with the MCD-3D standard ISO 22900-3 and ODX technology can be realized.

Scalability

By combining several EDICpci interfaces (or even other EDIC® interfaces), the number of communication channels available on the PC system can quickly be adapted to the relevant application.

Flexibility

Software upgrades are also available for EDICpci ensuring it is always perfectly equipped for future applications. This is also the way to realize customer-specific software solutions. The CAN bus physics can be varied by using piggybacks.

Technical Data

Format	Standard PCI card
Power supply	8 ... 32 V via vehicle diagnostic connector
Current consumption	10 mA to 500 mA (current limitation in the case of a short circuit)
Microcontroller	16-bit microcontroller C167, 40 MHz
PC interface	PCI Standard Rev. 2.2 for 5 V and 3.3 V systems
Vehicle interface	D-Sub 25-pin, all signals galvanically isolated from the PC interface
CAN	2 CAN channels in acc. with ISO11898 and CAN 2.0B Channel 1: CAN high-speed (TJA1041, 1 Mbit/s) / CAN low-speed with optional transceiver piggyback switchable by software Channel 2: CAN high-speed (TJA1050, 1 Mbit/s)
LIN	LIN master or LIN slave node; operation depends on the operating software and is alternative to ISO 9141-2
ISO 9141-2	K- and L-line for 12V and 24V vehicle systems; baud rate can be finely set; max. 256 kBaud (depending on the protocol and bus physics); operation alternative to LIN
Analog inputs	6 freely available analog inputs (0 ... 32 V, 10-bit resolution, 2 % accuracy); operation depends on the operating software used Ignition (KL 15) Battery voltage (KL 30)
Digital outputs	2 freely available digital outputs, Open Collector, max. 200 mA; operation depends on the operating software used
Temperature range	Operation: 0 ... +50 °C, storage: -25 ... +85 °C
Vehicle interfering pulses	In acc. with ISO 7637; pulses 1 – 5
EMC conformity	Noise emission: EN 55022:1998 Class B Interference immunity: EN 61000-6-2:2001 (industrial environment) FCC part 15 subpart B class B (industrial environment)
Software interface	D-PDU API according to ISO 22900-2 or J2534 API (PassThru)
System requirements	Operating system see data sheet D-PDU API

Order Numbers

EDICpci	EDIC PCI bus interface card for ISO 9141-2 and CAN 2.0B including D-PDU API software on data carrier
EDICpci-PTD	EDIC PCI bus interface card for ISO 9141-2 and CAN 2.0B including PassThru software interface on data carrier

Supplementary Products and Services

OPT-CAN1053/HW	Piggyback for CAN low-speed with transceiver TJA1053 or compatible
KAB05-ED25-LAB	Adapter box with lab jacks for all signals, cable length approx. 2 m
KAB06-ED25-J1962	Connecting cable to CARB connector (SAE J1962 / ISO 15031-3), cable length approx. 0.8 m
KAB07-ED25-J1962	Connecting cable to CARB connector (SAE J1962 / ISO 15031-3), cable length approx. 3 m

Softing Automotive · Richard-Reitzner-Allee 6, 85540 Haar – Germany
Phone +49-89-45656-420 · **Fax** +49-89-45656-499 · **Internet** www.automotive.softing.com