EDICusb

Multibus USB Interface for Vehicle Electronics

Diagnostic interfaces from Softing are based on the tried and tested EDIC® hardware and software platform. EDICusb is perfect for the use of heterogeneous onboard networks with CAN bus, K-line and LIN bus, and enables universal implementation in engineering and testing.

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
- Status display via 3 LEDs
- Galvanic isolation

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 EDICusb 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 EDICusb 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	Approx. 150 x 80 x 30 mm, weight approx. 300 g
Power supply	8 ... 32 V via vehicle diagnostic connector
Current consumption	Approx. 400 mA at 12 V
Microcontroller	16-bit microcontroller XC161CJ, 40 MHz
PC interface	USB V2.0 Full Speed, 12 Mbit/s, pluggable USB cable (type B jack) Optional on request: Bluetooth® V1.1 Class 2 (range approx. 10 m)
Vehicle interface	D-Sub 25-pin, all signals galvanically isolated from the PC interface
CAN	2 CAN channels in acc. with ISO 11898 and CAN 2.0B with 11-/29-bit identifier Channel 1: CAN high-speed (TJA1050, 1 Mbit/s) / CAN low-speed (TJA1054, 125 kbit/s), transceiver switchable via 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. 125 kBaud (depending on the protocol and bus physics); operation alternative to LIN
Digital inputs	Ignition (KL 15)
Temperature range	Operation: 0 ... +50 °C, storage: -25 ... +70 °C
Vehicle interfering pulses	In acc. with ISO 7637; pulses 1 – 5
EMC conformity	Noise emission: EN 55022, EN 55011 Class A and EN 61000-6-4 (industrial environment) Interference immunity: EN 61000-6-2 (industrial environment) FCC part 15 subpart B limit A (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

EDICusb	EDIC USB vehicle interface for ISO 9141-2 and 2 x CAN 2.0B including USB cable (1.8 m) and D-PDU API software on data carrier KAB06-ED25-J1962: connecting cable to CARB connector (SAE J1962 / ISO 15031-3), cable length approx. 0.8 m
EDICusb-PTD	EDIC USB vehicle interface for ISO 9141-2 and 2 x CAN 2.0B including USB cable (1.8 m) and PassThru software interface on data carrier KAB06-ED25-J1962: connecting cable to CARB connector (SAE J1962 / ISO 15031-3), cable length approx. 0.8 m

Supplementary Products and Services

KAB05-ED25-LAB	Adapter box for connecting vehicle signals via lab connector, cable length approx. 2 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