DATASHEET

CAN-IB640/PCIe

The Ixxat CAN-IB640/PCIe is an active PCI Express interface card with up to four CAN FD channels, four LIN channels and galvanic isolation. It is an easy and cost-efficient way to connect computers to CAN FD/LIN bus networks.

The active card fulfills even high requirements in data pre-processing, like intelligent data handling and active filtering of the received and transmitted messages.

Galvanic isolation up to 1000 volts is provided between the computer and CAN sides.

FEATURES AND BENEFITS

- Active CAN FD interface card with powerful 32 bit microcontroller
- 4 x CAN channels (high-speed CAN or CAN FD)
- 4 x LIN channels
- All fieldbusses accessible via 2 x D-Sub-9 connections
- Single Lane (x1) PCI-Express-Interface
- Galvanic isolation
- Common driver interfaces for easy exchange of the PC interface type
- Powerful programming interface for Windows (VCI) as well as for Linux (socketCAN or ECI), QNX and VxWorks (ECI)

ORDER NUMBER	1.01.0245.42012
CAN FD/CAN channels	4
CAN bus interface	2x D-Sub 9, CiA standard pinning according to CiA 303-1
CAN bit rates	10 kbit/s to 1 Mbit/s
CAN FD bit rates	10 kbit/s to 8 Mbit/s
CAN bus termination resistors	None
CAN controller	Internal; CAN 2.0 A/B
CAN/CAN FD transceiver	MCP2562FDT-ESW
Galvanic isolation	1 kV DC for 1 sec.
CAN propagation delay (typical)	With galvanic isolation typical 6 ns, max. 10 ns
LIN bit rates	Up to 20 kbit/s
LIN transceiver	MCP2003B-E/MC
LIN VBAT	5.5 V to 30 V
LIN channels	4

ORDER NUMBER	1.01.0245.42012
PC bus interface	PCI express (V1.1), single lane port (x1)
PC addess range/interrupts	Plug & Play
Power supply	Via PCIe socket (3.3 V DC)
Power consumption	Typ. 500 mA
Dimensions	68.9 x 127 mm
Weight	Approx. 69 g
Operating temperature	0 °C to +70 °C
Storage temperature	-40 °C to +85 °C
Relative humidity	10 to 90 %, non-condensing
Certification	CE, FCC
LED	The red and green LEDs show the current boot up state and the state of the firmware start.
Operating systems	Windows 11, Windows 10 (32/64), Windows 8 (32/64), Windows 7 (32/64), Linux

CERTIFICATES
CE FC

ACCESSORIES	ORDER NUMBER
Termination adapter for CAN/CAN FD (D-Sub plug to socket)	1.04.0075.03000
CAN cable 2.0 m (D-Sub plug to socket)	1.04.0076.00180
CAN Y cable 0.22 m	1.04.0076.00001
CAN Y cable 2.1 m	1.04.0076.00002

PIN ALLOCATION

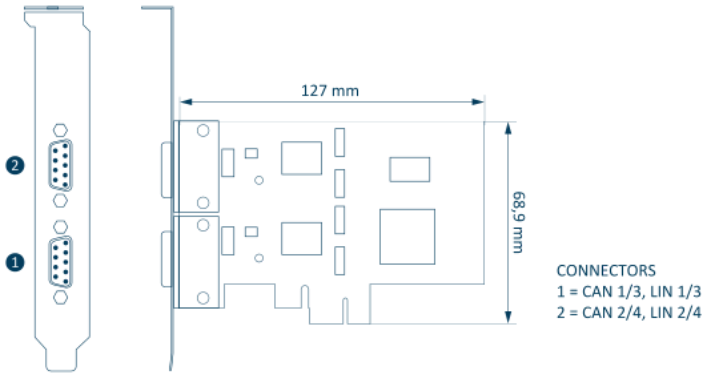
CAN CONNECTOR D-Sub 9 ❶

Pin no.	Signal
1	CAN-Low (CAN3)
2	CAN-Low (CAN1)
3, 5	CAN-GND
4	CAN-High (CAN3)
7	CAN-High (CAN1)
6	LIN 3
8	LIN 1
9	$VBAT_{LIN\,1/3}$

CAN CONNECTOR D-Sub 9 ❷

Pin no.	Signal
1	CAN-Low (CAN4)
2	CAN-Low (CAN2)
3, 5	CAN-GND
4	CAN-High (CAN4)
7	CAN-High (CAN2)
6	LIN 2
8	LIN 4
9	$VBAT_{LIN\,2/4}$

TECHNICAL DRAWING



SOFTWARE SUPPORT

Drivers and programming interfaces

Comprehensive and powerful driver and software packages for the CAN-IB640/PCIe series are available for free at ixxat.com/support. The driver packages can be downloaded for Windows (VCI - Virtual Communication Interface) and Linux (ECI), and are available on request for various real-time operating systems (INtime, RTX, Vxworks, QNX).

Using the Ixxat driver packages, customers can easily switch between the different PC interfaces offered by HMS. This would allow them to use USB, PCIe, Ethernet or other PC connections without changes to their application. The drivers support all protocols available on the interface with one API, so customers can easily access CAN, CAN FD and LIN simultaneously and get the data with a common time stamp.

Softwaretools

The software tool canAnalyser3 Mini is included in the VCI V4 download package and enables the first analysis steps and monitoring in CAN networks. Further information about the tools as well as Demo/Trial versions are available on the Ixxat webpage.