

USB-to-CAN V2 automotive



The Ixxat USB-to-CAN V2 automotive with two CAN channels (high-speed/low-speed), LIN and galvanic isolation is a super versatile, uncomplicated and cost-efficient way to connect a computer to CAN/LIN bus networks. It is a very reliable tool for CAN applications, e.g. in the field of test, development, maintenance or control applications.

Galvanic isolation reliably enhances the protection of the device against damage to electronics caused by voltage peaks.

Two RJ45 to D-Sub 9 adapter cables are included.

FEATURES AND BENEFITS

- Cost-effective, extremely versatile and reliable
- High-precision time-stamp accuracy
- High data throughput combined with low latency
- Native USB 2.0 hi-speed (480 Mbit/s), compatible with USB 1.1 and USB 3.x
- Galvanic isolation
- 2 x high-speed CAN connection up to 1 Mbit/s with 2 x RJ45 sockets
- CAN 1 can be switched between high- and low-speed (ISO 11898-3)
- 1 x LIN communication in master or slave mode
- LIN frame format switchable
- 2 x RJ45 to 9-pin D-Sub adapter cables included
- Common driver interface 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	1.01.0283.22042
CAN channels (high-speed)	2
CAN channels (low-speed)	1
CAN bus interface	2 x RJ45 socket (incl. 2 x D-Sub 9 adapter with CiA standard pinning according to CiA 303-1)
CAN bit rates	10 kbit/s to 1 Mbit/s (CAN high-speed), 10 kbit/s to 125 kbit/s (CAN low-speed)
CAN bus termination resistors	Yes, CAN low-speed with 4.7 kΩ
CAN controller	Internal; CAN 2.0 A/B
CAN high-speed transceiver	SN65HVD251D
CAN low-speed transceiver	NXP TJA1054

ORDER NUMBER	1.01.0283.22042
Galvanic isolation	1000 V DC for 1 sec., 500 V AC for 1 min.
Time stamp resolution	150-250 µs
LIN bit rates	Max. 20 kbit/s
LIN transceiver	NXP TJA1020
LIN VBAT	8 to 18 V DC, 12 V DC typical
LIN channels	1
USB interface	USB 2.0 hi-speed (480 Mbit/s), compatible with USB 1.1 and USB 3.x
USB connector	Type-A connector
Microcontroller	32 Bit
RAM	192 kByte
Flash	512 kByte
Power supply	+5 V DC/300 mA (via USB port)
Power consumption	48 mA-max. 300 mA
Dimensions	80 x 50 x 22 mm
Weight	Approx. 100 g
Operating temperature	-20 °C to +70 °C
Storage temperature	-40 °C to +85 °C
Protection class	IP40
Relative humidity	10 to 95 %, non-condensing
Certification	CE, FCC, UKCA
Housing material	ABS plastic
LED	5 x LEDs for CAN 1, CAN 2, CAN LS, LIN and USB communication
Operating systems	Windows 11, Windows 10 (32/64), Windows 8 (32/64), Windows 7 (32/64), Linux

CERTIFICATES


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



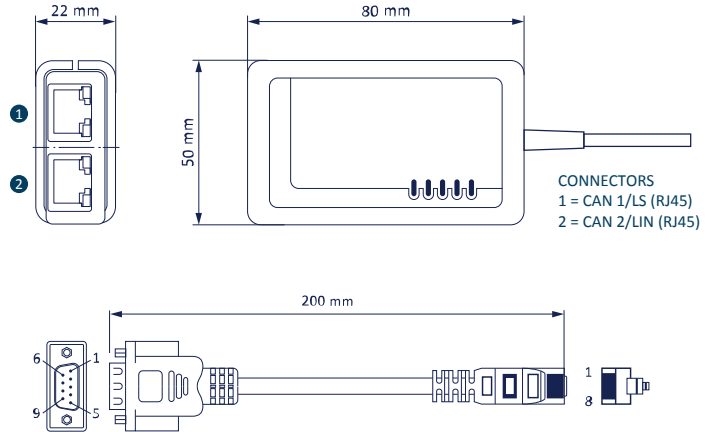
Pin no.	Signal
7	CAN-High
2	CAN-Low
3, 6	CAN-GND
4	CAN-High LS (only CAN1)
1	CAN-Low LS (only CAN1)
5	LIN (only CAN2)
9	VBAT _{LIN} (only CAN2)

CAN CONNECTOR RJ45 ① ②



Pin no.	Signal
1	CAN-High
2	CAN-Low
3, 7	CAN-GND
4	CAN-High LS (only CAN1)
5	CAN-Low LS (only CAN1)
6	LIN (only CAN2)
8	VBAT _{LIN} (only CAN2)

TECHNICAL DRAWING



SOFTWARE SUPPORT

Drivers and programming interfaces

Comprehensive and powerful driver and software packages for the USB-to-CAN V2 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.

Software tools

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](http://ixxat.com) webpage.