DATASHEET

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 workhorse for CAN applications e.g. in the field of automotive, mobility, 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 and 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 (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 (high-speed), 10 kbit/s to 125 kbit/s (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
CE FC UKCA

ACCESSORIES	ORDER NUMBER
Termination adapter for CAN/CAN FD (D-Sub male to female)	1.04.0075.03000
CAN cable 2.0 m (D-Sub male to female)	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

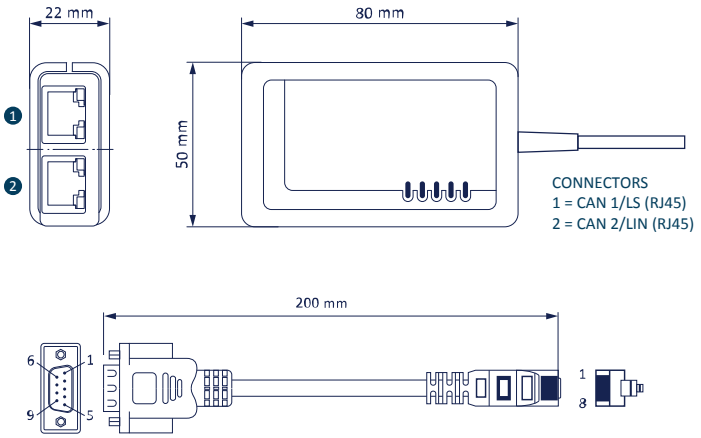
CAN CONNECTOR D-Sub 9

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 ❶ ❷

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

A comprehensive and stable driver and software package is available for the USB-to-CAN V2 series, which can be downloaded free of charge from ixxat.com/support.

The Ixxat driver packages for Windows (VCI) as well as Linux, INtime, RTX, VxWorks and QNX (ECI) also enable use in existing applications without software adaptation. The APIs for CANopen and SAE J1939 also support the USB-to-CAN V2 device family.

The VCI V4 (Virtual Communication Interface) is the driver interface for Ixxat interfaces under Windows and can be downloaded free of charge from ixxat.com/vci or ixxat.com/support. Customer-specific applications for communication via CAN, CAN-FD, LIN and Industrial Ethernet can be developed on the basis of the VCI.

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.