

# USB-to-CAN FD automotive



The Ixxat USB-to-CAN FD automotive with two switchable CAN FD/CAN high-speed channels, LIN and galvanic isolation is a super easy, robust, versatile, and cost-efficient way to connect a computer to CAN FD/LIN bus networks. It is a very reliable workhorse for CAN FD 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

- CAN, CAN FD and LIN in one device
- Cost-effective and extremely versatile
- 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 CAN FD connection up to 8 Mbit/s with 2 x RJ45 sockets
- 1 x LIN communication in master or slave mode
- LIN frame format switchable
- Power is taken from the USB bus
- 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	1.01.0353.22012
CAN FD / CAN channels	2
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 FD bit rates	250/500 kbit/s arbitration rate with 500 to 8000 kbit/s data rate (predefined), user defined bitrate is possible.
CAN bus termination resistors	None
CAN controller	IFI CAN_FD IP/80 MHz

ORDER NUMBER	1.01.0353.22012
CAN/CAN FD transceiver	MCP2562FDT
Galvanic isolation	800 V DC/500 V AC for 1 min
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)
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	Four LEDs for CAN 1, CAN 2, USB and LIN 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 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

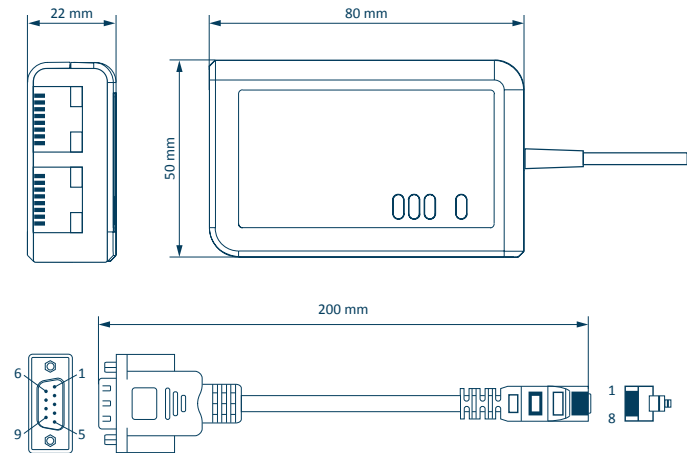
### CAN CONNECTOR D-Sub 9

Pin no.	Signal
7	CAN-High
2	CAN-Low
3, 6	CAN-GND
5	LIN (only CAN2)
9	VBAT <sub>LIN</sub> (only CAN2)

### CAN CONNECTOR RJ45

Pin no.	Signal
1	CAN-High
2	CAN-Low
3, 7	CAN-GND
6	LIN (only CAN2)
8	VBAT <sub>LIN</sub> (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 FD series, which can be downloaded free of charge from [ixxat.com/support](http://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 FD 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](http://ixxat.com/vci) or [ixxat.com/support](http://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.

### 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.