Ixxat®
BY HMS NETWORKS

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 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

- 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
- 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	-
CAN controller	IFI CAN_FD IP/80 MHz
CAN/CAN FD transceiver	MCP2562FDT
Galvanic isolation	800 V DC for 1 sec., 500 V AC for 1 min.

ORDER NUMBER	1.01.0353.22012
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	4 x 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
CE FCC UKCA

| 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

hms

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	$VBAT_{LIN}$ (only CAN2)

CAN CONNECTOR RJ45

Pin no.	Signal
1	CAN-High
2	CAN-Low
3, 7	CAN-GND
6	LIN (only CAN2)
8	$VBAT_{LIN}$ (only CAN2)

TECHNICAL DRAWING

22 mm

80 mm

50 mm

200 mm
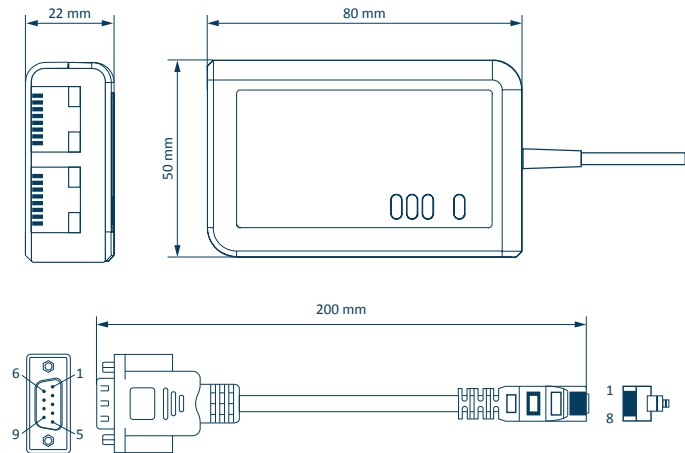
SOFTWARE SUPPORT

Drivers and programming interfaces

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