USB-to-CAN V2

Cost-effective CAN interface family for the USB port

The IXXAT USB-to-CAN V2 is the next generation of the well-known IXXAT USB-to-CAN interface. With up to two CAN High Speed channels, one CAN Low Speed channel, and a LIN channel, depending on the device variant, a wide variety of applications can be addressed in both the industrial and the automotive sectors.

By using powerful hardware and connecting over USB 2.0 Hi-Speed (480 MBit/sec), these interfaces achieve very high data throughput with minimum latency and low power consumption. This allows them to provide the reliable, loss-free transmission and receipt of messages in CAN networks at high transmission rates and bus load. The messages are also timestamped and can be filtered and buffered directly in the USB-to-CAN V2.

The current versions of the IXXAT driver packages for Windows and Linux (VCI and ECI) support the new USB-to-CAN V2, permitting its use in existing applications with no need to modify software. The APIs for CANopen and SAE J1939 also support the new USB-to-CAN V2 device family.

The USB-to-CAN V2 is available in different variants. In the USB-to-CAN V2 compact variant, the CAN connection is implemented as a sub-D9 plug or alternatively as an RJ45 connector. For devices with two CAN interfaces, these are implemented as RJ45 connectors. Adapter cables to sub-D9 plugs are included with the devices. Additional options include galvanically isolated CAN interfaces, bulk variants, and support for ISO 11898-3 low-speed CAN and LIN.

A newly introduced variant is the IXXAT USB-to-CAN V2 embedded, which is designed without a housing, with or without a slot board and adapted USB cable for installation into a computer.
Due to its extremely interesting price and compact size, the USB-to-CAN V2 interface is ideal for use in series products and in combination with the canAnalyser for development, service, and maintenance tasks.

Its newly developed, rugged housing permits customer-specific adaptation (custom design / brand labeling).

LIN (automotive variant)
LIN communications are supported in either LIN master or LIN slave mode. As LIN slave, the interface responds automatically to master requests it receives. The response data is updated through the PC API using a buffer. In master mode, the master calls are processed by the PC application. Incoming LIN messages are forwarded to the application with a timestamp, master request, response, and status information

Technical Data

PC bus interface	USB 2.0, Hi-Speed
Microcontroller	32 bit
CAN controller	Internal; CAN 2.0 A/B
CAN baudrates	10 kBit/s ... 1 Mbit/s

CAN high-speed transceiver	TI SN65HVD251D
CAN low-speed transceiver (1)	TJA1055T
LIN transceiver (1)	TJA1020
LIN protocol (1)	V1.3 and V2.0
LIN baudrate (1)	max. 20 kBaud
Galvanic isolation	optional, 1 kV, 1 sec.
Power supply	5 V, max. 500 mA via USB port
Temperature range	-20°C ... 70°C
Fieldbus connection	according to CiA 303-1
Certification	CE, EN 55022:2010, EN61000-6-1:2007

(1) Only available in USB-to-CAN V2 automotive

Scope of delivery
- USB-to-CAN V2 interface in the compact, embedded, professional, or automotive variants
- Interfaces with RJ45 connectors are delivered with RJ45 on a sub-D9 adapter cable
- Operating manual
- CAN driver VCI for Windows XP, Windows 7, Windows 8
- CAN driver ECI for Linux (available for download from www.ixxat.com)
- Simple "miniMon" CAN bus monitor

☑ This product is available from stock.

Order numbers/Variants

Variants / Features	CAN HS ports	CAN LS ports	LIN ports	Fieldbus galvanically isolated	Sub-D9	RJ45	Order number
USB-to-CAN V2 **compact**	1			✓	✓		1.01.0281.12001
	1			✓		✓	1.01.0281.12002
	1				✓		1.01.0281.11001
USB-to-CAN V2 **embedded** (1)	1			✓	✓		1.01.0282.12001
USB-to-CAN V2 **professional**	2			✓		✓	1.01.0283.22002
USB-to-CAN V2 **automotive**	2 (2)	1	1 (3)	✓		✓	1.01.0283.22042

(1) PC installation via slot board and internal USB cable
(2) One channel via software between ISO11898-2 and ISO11898-3 switchable
(3) LIN master / slave mode via software switchable

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