Ixxat®
BY HMS NETWORKS

USB-to-CAN FD

Active USB interface

2 x CAN FD / CAN, 1 x LIN

The USB-to-CAN FD has – depending on the device variant – up to two channels, which support three switchable operation modes: ISO CAN FD, non ISO CAN FD and CAN High-Speed. The automotive variant provides also one LIN channel.

FEATURES AND BENEFITS

- CAN, CAN FD and LIN in one device
- Cost-effective and extremely versatile
- Common driver interface for easy exchange of the PC interface type
- For industrial and automotive applications
- Galvanic isolation

VARIANTS

The USB-to-CAN FD is available in different variants – compact, automotive and embedded. The compact variant has one switchable CAN / CAN FD channel with a D-SUB 9 plug. The automotive variant has two switchable CAN / CAN FD channels with RJ45 connectors. Adapter cables to D-SUB 9 plugs are included in the scope of delivery. The USB-to-CAN FD embedded is designed without a housing, it comes with a slot bracket and a USB cable for installation into a computer.

Compact
D-SUB 9

Automotive
RJ45

Embedded

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.

COMPARISON OF THE DIFFERENT USB-CAN INTERFACES

HMS offers under the Ixxat brand different USB interfaces for CAN. Besides a one or two channel version and the support of CAN FD and LIN, also an embedded variant for implementation into customer devices is offered. An overview and comparison of the available USB interfaces can be found on the following page:

HIGH PERFORMANCE

By using powerful hardware and connecting over USB 2.0 Hi-Speed (480 MBit/sec), the USB-to-CAN FD 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 FD and 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 FD.

Due to its extremely interesting price and compact size, the USB-to-CAN FD 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 easy customer-specific adaptation (custom design / brand labeling).

TECHNICAL SPECIFICATIONS

PC bus interface	USB 2.0, Hi-Speed (480 MBit/s)
Microcontroller	32 bit
CAN bitrates	10 kbit/s to 1 Mbit/s
CAN FD bitrates	Arbitration rate up to 1000 kBit/s, data rate up to 8000 kbit/s. The data rates are verified by tests. User-defined bit rates are possible. Attention: The maximum data rate can be exceeded depending on the concrete operating conditions (cable length, settings made, remote stations,...), but it can also not be reached.
LIN bitrates	Max. 20 kbit/s
CAN controller	IFI CAN_FD IP
Galvanic isolation	800 V DC/500 V AC for 1 min
Power supply	Via USB, 5 V DC/300 mA
Temperature range	-20°C ... 70°C
Weight	Approx. 100 g
Dimensions	80 x 50 x 22 mm
Certification	CE, FCC

CONTENTS OF DELIVERY

- USB-to-CAN FD interface in the compact, embedded, or automotive variant
- 2 x RJ45 to Sub-D9 adapter cable (only USB-to-CAN FD automotive)
- Manual
- CAN driver VCI for Windows
- Simple "canAnalyser Mini" CAN bus monitor

Order numbers / variants

Variants /	CAN	CAN	LIN	Fieldbus	D-SUB	RJ45	Order number

Features	HS ports	FD ports		galv. isolated	9		
compact	1	1		X	X		1.01.0351.12001
embedded	1	1		X	X		1.01.0352.12001
automotive	2	2	1*	X		X	1.01.0353.22012

* LIN master / slave mode via software switchable

Accessories

Type	Order number	Product image
Sub-D9 Connector with CAN Termination	1.04.0075.03000	
CAN cable	1.04.0076.00180	
Y CAN cable	1.04.0076.00001	
More accessories and detailed information...		