CAN Interface for USB Selection Guide

Ixxat CAN interfaces for USB-based PC connection enable flexible usage either with mobile laptops or desktop applications. They are ideal suited for configuration and analysis of CAN-based networks and devices as well as for simple control applications.

Select the CAN interface line for USB that fits your requirements

Information about when to choose the simplyCAN product or the USB-to-CAN V2/FD product line

Since simplyCAN and USB-to-CAN V2/FD are using different drivers and have different features, it is important to know the differences before purchasing the device and starting with the development. Which interface is better suited, either the basic device simplyCAN or the flexible USB-to-CAN V2/FD product line, depends on the specific application requirements. This document provides the basis for this decision.

Questions regarding your application requirements:

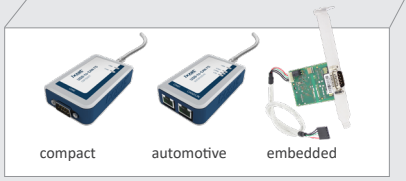
Q Shall your application(s) support CANopen or other higher CAN protocols?	A The VCI driver, which is used for the USB-to-CAN V2/FD interfaces, supports higher layer protocol expansions by seperate offered APIs. Suche expansions are not available for the simplyCAN, so in this case the USB-to-CAN V2/FD interface would be the better choice.
Besides USB, shall your application also support other types of PC/CAN interfaces in the future (e.g. CAN-to-Ethernet, PCIe cards)?	The simplyCAN driver was specially designed and optimized for this device, it supports no other Ixxat CAN interface. In contrast, the VCI driver supports a variety of CAN interfaces and allows easy switching between interfaces without adaptation of the application. So if you want to support different PC interface standards with your application, the USB-to-CAN V2/FD interface is the right choice.
Can it be, that in future several applications have to access the USB/CAN interface at the same time?	The simplyCAN driver allows a 1-to-1 application/interface connection, which is sufficient for a wide range of applications. If simultaneous access to the CAN bus by different applications is required, or if applications must be able to access several CAN interfaces simultaneously, the VCI driver and the USB-to-CAN V2/FD interface must be used.
Can message bursts occur in the network?	simplyCAN was designed for easy implementation into e.g. configuration applications. For this applications the supported maximum bus load of 50 % - 60 % is more than enough. For systems with the possibility of message bursts, the USB-to-CAN V2/FD might be the better choice, since it is able to time stamp and cache messages so that these are not lost.
Does your CAN application allow to set any baudrate?	simplyCAN supports all baudrates defined by the CiA, which covers most of the applications. To access the full range of possible baudrate settings, please choose a product which is supported by our VCI driver, e.g. the USB-to-CAN V2/FD.

Technical specifications



	Ixxat simplyCAN	USB-to-CAN V2	USB-to-CAN FD
Programming interface	Simple, 1 USB-to-CAN adapter can exchange data with exactly 1 application.	Comprehensive, with many possibilities to support various requirements of the application and the message exchange – multiple interfaces in one application, multiple applications use one interface. Special API for demanding applications.	
Additional APIs	C#, Python	.NET, Java, Labview, C#, Python	
Operating systems	Windows, Linux Same API for Windows and Linux	Windows, Linux, Real-time OS, … VCI/ECI/Socket-Interface	
Galvanic isolation	✓	✓ (optional)	
Applications	Diagnosis, configuration, commissioning	Control applications, real-time applications, diagnosis, configuration, commissioning	
Protocol support	CAN High-Speed	CAN High speed CAN Low speed LIN	CAN High speed CAN Low speed LIN CAN FD
Bitrates	CiA standard bitrates	Any bitrate (10 kbps - 1 Mbps)	Any bitrate (10 kbps - 1 Mbps) CAN FD up to 10 Mbps
User-defined bitrates	no	✓	
Maximum Bus Load	50 - 60 %	100 %	
Interfaces CAN	1 x Sub-D9, CiA standard pinning	**Depending on product version:** 1 and 2 x Sub-D9, CiA standard pinning RJ45 (with Sub-D9-Adapter)	**Depending on product version:** 1 and 2 x Sub-D9, CiA standard pinning RJ45 (with Sub-D9-Adapter)
Interfaces USB	USB 1.1 Full Speed (12 Mbps)	USB 2.0 Hi-Speed (480 Mbps)	
Design	Case	Case / Embedded / Plugin	Case / Embedded
Additional software	Free bus monitor software for Windows and Linux	Free bus monitor software canAnalyser mini for Windows	
Special features	No driver installation necessary, “Plug & Play” for Windows 10 and Linux.	API also supports all other HMS CAN / CAN FD interfaces. Setting of any CAN bit rate is supported.	

USB-to-CAN V2
Case, plug and feature versions



USB-to-CAN FD
Case, plug and feature versions

For more information about features and applications as well as for order numbers, please check the Ixxat webpage:

www.ixxat.com/usb-can-interfaces