VN7572

## Maximum Performance and Flexibility for FlexRay via PCIe

What is the VN7572 FlexRay Network Interface?

The FlexRay network interface VN7572 is ideally suited for the development, simulation or testing of FlexRay networks via the PCIe interface. The various channel combinations for the bus connections to FlexRay, CAN FD and LIN (K-Line) makes it an ideal interface for the laboratory or developer workstation.

Typical application areas:
> Flexible analysis of FlexRay networks and ECUs in combination with the bus systems CAN FD as well as LIN (K-Line)
> Precise time analysis of communication data
> Analysis and test of ECUs and gateway applications
> Measurement and calibration of ECUs via XCP (XCP on FlexRay, XCP on CAN).

Additionally, customer-specific applications can be created by using FlexRay-specific libraries.
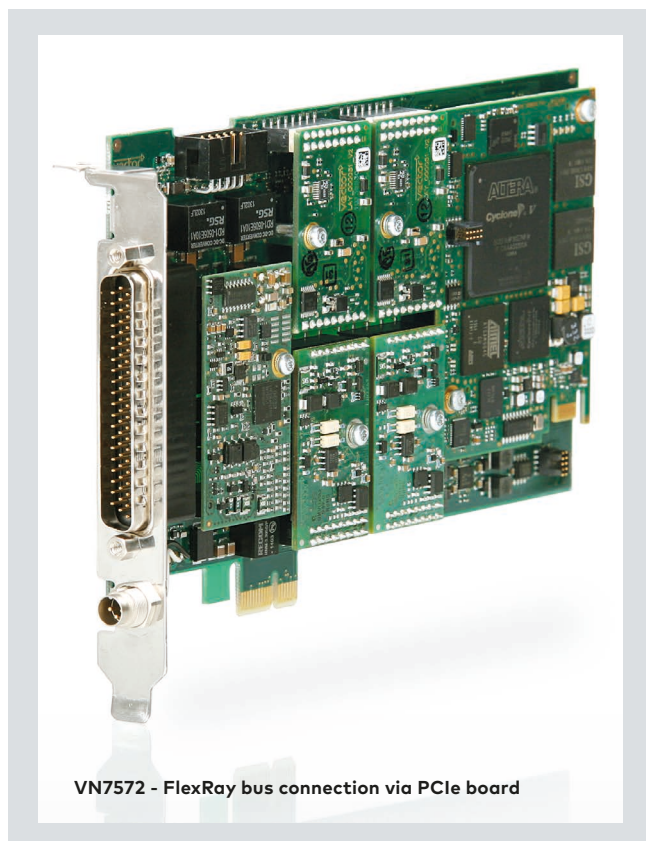
VN7572 - FlexRay bus connection via PCIe board

Overview of Advantages
> Simulation of extensive networks due to 2 MB send memory (parallel configuration of more than 1000 messages for transmission)
> Cold start of the FlexRay cluster without needing to add a network node
> Analysis of the network startup via an independent monitoring unit
> 2 FlexRay channels (each with channel A and B)
> Updating of functional range by FPGA update possible
> Variety of channel combinations possible by simply interchangeable transceivers for different bus physics
> Optimum performance for CANoe/CANape/ CANalyzer applications with CAN, CAN FD, FlexRay, LIN, J1708, and K-Line bus access
> Analog/digital IO functionality
> Connection for external time synchronization

Functions
FlexRay
> Dynamic reconfiguration of the CC buffers
> Transmission and reception of data and null frames
> Detection of invalid frames
> Cycle multiplexing
> In-cycle response
> Hardware-based incrementing of a payload area
> Support of PDUs
> FlexRay gateway (channel A and B)
> Startup + asynchronous monitoring allows detection of FlexRay frames and symbols, even before the communication controller has synchronized itself to the bus.

General
> Synchronization with several devices and other bus systems (e.g. CAN(FD), LIN)
> Low PC loading due to Direct Memory Access DMA
> Very short latency times
> Support of CAN FD up to 8 MBit
> Fast CAN flashing through hardware-based flash sequence support
> Extended LIN stress functions, e.g. for LIN 2.1 conformance tests

More information: www.vector.com/vn7572

Technical Data

Channels / channel combinations	VN7572[2]		
	FlexRay	CAN FD	LIN/K-Line
	1	7	-
	1	6	1
	1	5	2
	2	6	-
	2	5	1
	2	4	2
	-	8	-
	-	7	1
	-	6	2
	-	5	3[3]
	-	4	4[3]
Transceiver[1]	FR-, CAN(FD)-, LINpiggies, analog/digital IO functionality with IOpiggy available [1]		
FR Comm. Controller analysis	Bosch E-Ray (FPGA)		
startup	Bosch E-Ray (FPGA)		
Send memory	2MB		
FlexRay Cluster (A+B)	2		
PC interface	PCIe		
Trigger (inputs/outputs)	1 (with FRpiggy 1082cap)		
Analog/digital IO functionality	IOpiggy8642 digital: 8 inputs, 6 outputs / analog: 4 inputs, 2 outputs		
Connector	1 x D-SUB62[2]		
Power consumption	7 W		
Operating systems	Windows 10 (64 bit) / Windows 11 (64 bit)		
Driver libraries	XL Driver Library		
Temperature range, operating:	-30..+50ºC		
storage:	-40..+85ºC		
Dimensions (LxWxD)	181 x 127 x 22 mm		

[1]: Detailed listing of all transceivers see the transceivers overview

[2]: Breakoutbox or 9-fold Y-cable with 8 x D-SUB9 (FlexRay, CAN(FD), LIN) and 1 x D-SUB15 (IO) as accessory available

[3]: max. 2 x K-Line channels available