Bus Interfaces

VN1600

FACTS

Flexible, Cost-efficient Bus Interfaces with USB Interface for CAN, LIN, K-Line, J1708 and IO

What is VN1600

The VN1600 interface family succeeds the market-proven USB CANcaseXL interface.

While the VN1610/VN1611 with 2 channels focuses on minimum size and weight, the VN1630/VN1640 with 4 channels is designed for flexibility and IO support.

The VN1600 family provide the best network interface for Vector tools such as CANoe, CANalyzer, CANape, Indigo, vFlash as well as customer applications; in the laboratory, at the test bench, at the service garage or in the vehicle.

The application areas range from simple bus analysis to complex remaining bus simulations, diagnostic, calibration and flash programming tasks. The product's multi-application support makes it possible to access multiple programs in parallel on one device and on the same channel.

Overview of Advantages

- Bus transceiver with proven CAN/LIN/ J1708-Piggies*
- Power supplied via USB, in 4-channel applications as well
- Optimal performance for CANoe*, CANalyzer*, CANape* or customer applications, with Multi-Application support
- Prepared for CAN buses with higher data rates (CAN FD) by reconfigurable FPGA hardware architecture
- Advanced LIN stress e.g. for LIN 2.1 conformance tests (VN1630/1640)
- Synchronized channels with minimal latency times
- K-Line support *
- CAPL on Board for CAN (VN1630/40)
- Quick CAN flashing by a hardware-based flash routine implementation
- Customer applications can be linked with the proven XL Driver Library

* Ask Vector about required software versions and supported piggies.

Analog/digital IO for VN1630/VN1640

- Analog input: 1 channel, 0..18V, max. 32V, Ri>1MOhm, 10bit ADC, 1kSps
- Digital inputs: 2 channels, Schmitt trigger, max. 32V, Vhigh≥2.7V, Vlow≤2.0V, Vhyst=0.7V, Ri>200kOhm, max. 1kHz
- Digital output: 1 channel, open collector, max. 32V, max. 500mA, max. 1kHz
- D-SUB9 socket with common IO GND

Functions

- Flexible FPGA-based CAN and LIN implementations allows 100% bus load on all channels
- Performing LIN 2.1 conformance tests with CANoe (VN1630/1640)
- Fast baudrates are available: CAN (max. 2 Mbit/s), LIN (max. 330 Kbit/s)
- The integrated IO functionality of the VN1630/40 makes it possible to synchronously acquire signals along with CAN/LIN messages and switch loads up to 500mA via a digital output
- For weight and space savings, the VN1610/ VN1611/ VN1630 have integrated CAN High-Speed transceiver(s). The standard D-SUB9 connector now supports dual channels.

Technical Data

	VN1610	VN1611	VN1630	VN1640
Max. channels	2	2	4	4
Variable transceivers (Piggies)	-	-	2	4
Permanently installed transceivers	2 x CAN 1051cap	1 x LIN 7269cap 1 x CAN 1051cap	2 x CAN 1051cap	--
Channel combinations				
Fixed	2 x CAN	1 x LIN / K-Line 1 CAN	2 x CAN	--
Variable (Piggy: *mag/*cap)			0..2 x CAN 0..2 x LIN 0..2 x K-Line 0..2 x J1708	0..4 x CAN 0..4 x LIN 0..2 x K-Line 0..4 x J1708
No. of D-SUB connectors	1 (dual channel)		2 (dual channel)	4 (single channel)
Time stamp accuracy				
within one device	1 µs		1 µs	
between multiple devices	30 µs		30 µs	
with Sync cable	not possible		1 µs	
Baudrates	CAN up to 2 Mbit/s. LIN up to 330 kbit/s. With ST. min control in hardware for fast flashing (256Ch).			
Mean reaction time	250 µs			
Error frame / Remote frame	Bit-precise detection and generation			
Operating system requirement	Windows XP/Vista (32 bit), Windows 7 (32 and 64 bit)			
PC interface	USB 2.0 High-speed, fully bus-powered, no external power supply			
Driver libraries	XL Driver Library			
Ambient temperature range	Operating: -40..+70 °C, Storage: -40..+85 °C			
Dimensions (L/W/H)	65mm x 42mm x 20mm		85mm x 106mm x 32mm	85mm x 106mm x 42mm
Weight	approx. 60g		approx. 210g	approx. 290g
Housing	Robust plastic housing		Highly robust aluminum housing