VN1600

Flexible Bus Interfaces for CAN, LIN, K-Line, J1708 and IO

What is VN1600

The VN1600 interface family provides a flexible and fast access to CAN (FD) and LIN networks. While the VN1610/VN1611 with 2 channels focuses on minimum size and weight, the VN1630A/VN1640A with 4 channels is designed for flexibility and IO support. The VN1630 log provides additional recording functionality. The interfaces 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, also in 4-channel applications
- Optimal performance for CANoe*, CANalyzer*, CANape* or customer applications, with Multi-Application support
- Support of CAN FD up to 8 Mbit/s
- Advanced LIN stress e.g. for LIN 2.1 conformance tests (VN1630A/VN1640A)
- Synchronized channels with minimal latency times
- K-Line support *
- CAPL on Board for CAN, LIN, IO (1630A/VN1640A)
- Fast CAN flashing by a hardware-based flash routine implementation
- Customer applications can be linked with the proven XL Driver Library
- LEDs for displaying channel activity and device status (VN1630A/VN1630 log/VN1640A)
- Easy configuration of the recording functionality with the Vector Logger Configurator when using VN1630 log

* Ask Vector about required software versions and supported piggies.



Functions

> Flexible FPGA-based CAN and LIN implementation allows 100 % bus load on all channels
> Performing LIN 2.1 conformance tests with CANoe (VN1630A/VN1640A)
> Fast baudrates: CAN (max. 2 Mbit/s), CAN FD (max. 8 Mbit/s) and LIN (max. 330 kbit/s)
> The integrated IO functionality of the VN1630A/VN1640A makes it possible to synchronously acquire signals along with CAN/LIN messages and switch loads up to 500 mA via a digital output
> For weight and space savings, the VN1610/VN1611/VN1630A/VN1630 log have integrated CAN High-Speed transceiver(s). The standard D-SUB9 connector supports dual channels.
> Recording functionality for monitoring vehicle communication (CAN (FD), LIN) with VN1630 log. Data is stored on an SD/SDHC card (up to 32 GB).

Analog/digital IO: VN1630A/1630 log/1640A

> Analog input:
1 channel, 0...18 V, max. 50 V, (ext. circuitry required)
Ri > 1 MOhm, 10 bit ADC at 1 kS/s
> Digital input:
2 channels, Schmitt trigger, max. 32 V, Vhigh ≥ 2.7 V, Vlow ≤ 2.2 V, Vhyst = 0.5 V, Ri > 200 kOhm, max. 1 kHz
> Digital output:
1 channel, open collector, max. 32 V, max. 500 mA, max. 1 kHz
> D-SUB9 socket

More information: www.vector.com/vn1600

Technical Data

	VN1610	VN1611	VN1630A/VN1630 log	VN1640A
Max. channels	2	2	4	4
Variable transceiver (Piggies)	--	--	2	4
Permanently installed transceiver	2 x CAN 1051cap	1 x LIN 7269cap 1 x CAN 1051cap	2 x CAN 1051cap	--
Channel combinations				
fixed	2 x CAN (FD)	1 x LIN / K-Line 1 CAN (FD)	2 x CAN (FD)	--
variable (Piggy: *mag/*cap)			0..2 x CAN (FD) 0..2 x LIN 0..2 x K-Line 0..2 x J1708	0..4 x CAN (FD) 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			
sync. of multiple devices	typ. 50 µs			
with Sync cable	not possible		typ. 1 µs	
Baudrates	CAN up to 2 Mbit/s. CAN FD up to 8 Mbit/s. LIN up to 330 kbit/s. With ST. min control in hardware for fast flashing (256Ch).			
Recording functionality	--	--	VN1630 log	--
Mean reaction time	250 µs			
Error frame / remote frame	Bit-precise detection and generation			
Operating system	Windows 10 (64 bit)			
External power supply	VN1610/11/30A/40A: fully bus powered, no external power supply required; VN1630 log: 6 V .. 50V			
PC interface	USB 2.0 High-speed			
Driver libraries	XL Driver Library			
Temperature range	Operating: -40..+70 °C, storage: -40..+85 °C			
Dimensions (LxWxH) [mm]	65 x 42 x 20		VN1630A: 90 x 110 x 35 VN1630 log: 150 x 110 x 35	88 x 111 x 45
Weight	approx. 80 g		VN1630A: approx. 230 g VN1630 log: approx. 400 g	approx. 330 g
Housing	Robust plastic housing		Highly robust aluminium housing	

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