

ValueCAN 4-4

4 CAN FD - USB Single Cable Interface with IP65 Aluminum Enclosure

Four Channels of CAN FD in One Cable!

The ValueCAN 4-4 is part of the ValueCAN 4 series, a high-quality tool family for CAN FD and CAN 2.0. It builds on the field-tested ValueCAN 3, with the addition of software-controlled CAN termination, lower USB latency, cybersecurity support, standalone operation via 5V USB power supply.

The ValueCAN 4-4 is fully isolated from the PC. The isolation feature, which is not common on low cost interfaces, resolves issues with grounding or noise affecting the PC. The ValueCAN 4-4 is electrically hardened to survive abusive environments, including reverse battery and electrical transients.

The ValueCAN 4-4 has a strong aluminum case with a protective rubber boot. The USB and rugged cable end connectors are integrated in the device allowing users to carry just one cable for their project. (No more missing parts!) The ValueCAN 4-4 has "Surround LEDs" indicating status of the device itself and its networks. The LED configuration can also be customized. The device pinout is printed on the housing to make wiring easy. ValueCAN 4-4 is backed by a one-year warranty.

High Performance

The ValueCAN 4-4 has been tested and verified to support t4 high-bandwidth CAN FD networks. This includes 100% utilization at 8 Mb/s data rates on both CAN FD channels.

High-Level Protocol Support

The ValueCAN 4-4 is compatible with J1939, OBD2 on CAN, Keyword Protocol over CAN, UDS diagnostics, CCP/XCP, DeviceNet and CANOpen. Cables available for J1939 and diagnostics on CAN. Hardware-implemented ISO15765 allows super fast CAN FD ECU flashing.

Turn-Key Software Support

The ValueCAN 4-4 can be used with Vehicle Spy software, a powerful vehicle bus analyzer for monitoring messages and configuring baud rates. Vehicle Spy's other features include filtering traffic, decoding message data, building scripts, simulating nodes, creating GUIs to control, log and view data, and building graphical displays of data. Real Time Acceleration and Standalone Mode enable High Speed Flashing, Gateway, and ECU simulation.



DB26

OBD2

4x DB9

Standalone Capability

The ValueCAN 4-4 can load real-time Function Block scripts and C code created with Vehicle Spy Professional, which execute in real time at microsecond resolution. Scripts can be controlled and monitored with a PC or operate standalone.

Intrepid Security Module (ISM) for Cybersecurity

ISM allows for an embedded CCIF (C Code Interface). For example, a CCIF project can run in standalone mode with the Coremini feature. This makes vehicle network data accessible so it can be processed with the embedded DLL. This feature makes encryption and authentication of vehicle network data possible.



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CAN Bus Termination Test

The ValueCAN 4-2EL can be used with Vehicle Spy to check the termination of an attached CAN network. This is done by generating a CAN error frame and measuring how much time the bus takes to recover from the error (with microsecond-level resolution).

Software Support: Create Your Application Using the Included Intrepid DLL API, J2534 API, or RP1210 API

For those who wish to write their own applications, ValueCAN 4 includes a DLL and helpful examples for Python, Visual C++, C++ Builder, LabWindows CVI, LabVIEW, Java, MATLAB, Delphi, Excel, and Visual Basic. For more information on the DLL, please see the neoVI DLL documentation (ValueCAN 4 uses the neoVI DLL).

Network Interfaces and Features

- 4 CAN FD channel backward compatible with CAN 2.0 (Bosch MCAN Core)
- ISO11898 dual wire CAN Physical Layer (MCP2562FD) compatible with DeviceNet and CANOpen
- All 4 Dual Wire CAN channels have NON-ISO CAN FD and ISO CAN FD support.
- CAN FD baud rates supported upto 8Mbps
- Vehicle Spy Trial setup tool for baud rates
- Software-programmable CAN termination resistance.
- Real-time clock for 64 bit time stamping to an accuracy of 25 nanoseconds

Power and Performance

- Fully USB powered
- Field-upgradeable firmware
- Improved USB latency
- Lower power consumption than earlier generation devices
- Complete USB powered device

PC Interface

- USB operating system support: Windows 7/ 8/ 8.1/ 10/ Linux (Linux coming soon)
- USB Isolated. USB connection protects PC from potential damage
- Python Example: https://github.com/intrepidcs/python_ics
- ICSneoAPI Example: <https://github.com/intrepidcs/icsneoapi>

Specifications subject to change; please contact Intrepid for the latest information. All trademarks are the property of their respective owners.

Ordering Information

Rev. 20200616

Part Number	Description	Part Number	Description
VCAN4-4A-4DB9	ValueCAN 4-4 with USB Type A and 4 x DB9 Interfaces	VCAN4-4C-4DB9	ValueCAN 4-4 with USB Type C and 4 x DB9 Interfaces
VCAN4-4A-DB26	ValueCAN 4-4 with USB Type A and 1 x DB26HD Interfaces	VCAN4-4C-DB26	ValueCAN 4-4 with USB Type C and 1 x DB26HD Interfaces
VCAN4-4A-OBDD	ValueCAN 4-4 with USB Type A and OBD Interfaces	VCAN4-4C-OBDD	ValueCAN 4-4 with USB Type C and OBD Interfaces

Construction, Controls and Cabling

- Compact design: 102 x 45 x 31 mm (4" x 1.75" x 1.2")
- Light weight: less than 320 g (0.7 lb)
- Solid anodized aluminum case.
- Thick rubber boot for shock protection.
- Integrated 1 meter USB cable with USB type A and C options
- Integrated cable-end ruggedized metal connector choice between DB26(1m), OBD2(1.5m), 4xDB9(1m)
- Customization of pinouts available
- CAN/CAN FD channel status LEDs
- USB status LEDs indicating status of device
- Ability to control CAN/CAN FD termination resistance
- Operating temperature range: -40°C to +85°C

Advanced Features

- Device control by external software using three open APIs: neoVI DLL, SAE J2534, and TMC RP1210 A/B.
- J2534 compliant for CAN and ISO15765
- RP1210 compliant for CAN and J1939
- CCP protocol hardware acceleration
- Supports listen-only operations
- Double buffered CAN transmission
- Standalone operating capability

Certifications

- CE compliant

Warranty

- One year limited warranty



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