VS Vision Systems GmbH / Part Number 427

Model Information

Main Features

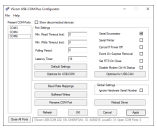
- Connects CAN-Bus via USB
- Supports CAN 2.0A / 2.0B, up to 1 Mbit/s
- CANopen supported by CANFestival
- SAE J1939 protocol supported by Vscom's J1939 API
- Drivers for Windows, Linux and Mac OS X
- LEDs for CAN and Error
- 16kV ESD surge protection
- 2.5kV electrical isolation (ISO version only)
- DIN-Rail and wall mountable
- Small metal case

Contact Online...

USB-CAN Plus
USB-CAN Plus ISO
(Vscom USB-CAN, Vscom USB-CAN ISO)

Quick Link: | Main Features | More Pictures | Overview | USB Interface | CAN Bus | Software | Power Requirement | Housing and Mounting | Environmental Data | Standards | MTBF (Mean Time Between Failures) | Warranty | Ordering Information | Options | Packaging |

More Pictures



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Overview

USB-CAN Plus is an USB to CAN Bus 2.0A/B adapter. Higher layer protocols, such as CANopen, can be assembled using the available development tools for complex automation control applications. Its low power consumption (0.5W typical), its extended temperature range (−20°C - +70°C), and the solid MTBF (23 Years at 45°C) make it an ideal system for industrial automation. A small footprint metal case, available with a DIN-Rail mounting option, makes the device flexible and convenient to use.

Usage Options

USB-CAN Plus provides various software tools to interface each level of user applications:

- The ASCII conversion protocol is handy for developing and testing any CAN-BUS configuration. Users simply connect using the virtual COM port, setting up a straightforward way to talk to the CAN controller. The device can also be used to manually transmit and receive CAN frames.
- Applications programmed by users should use the VScan API library (DLL), which handles the communication and ASCII conversion for the CAN frames in a transparent manner. In their applications, programmers have to handle only the CAN frames and status information, without taking care of the ASCII conversion. The VScan API is supported in C/C++, C#, VB.NET, Delphi and LabVIEW. Under Linux SocketCAN can be used as alternative to the VScan API. All VScom CAN devices support the standard Serial Line CAN (slcan) driver.

- The USB-CAN Plus series also supports CANFestival, an Open Source CANopen Framework. CANopen is a CAN-based higher layer protocol that is used in various application areas to unburden the developer from dealing with CAN-specific details. CANopen provides standardised communication objects for real-time data, configuration data, as well as network management data.
- The SAE J1939 protocol, resting upon the CAN hardware layer, is commonly used in the commercial vehicle area. A lot of other modern protocols are based on it, like NME200, ISOBUS, MilCAN or FMS. Vscom's J1939 API also includes support for the so called Transport Protocol, which will bypass the limit of 8 data bytes per message. It's available on J1939-enabled devices. Supports Windows, Linux, **.**NET read more ...

ESD protection and electrical Isolation

For usage in hazardous industrial environments, the CAN-Bus interface and USB port are ±16kV (air) and ±8kV (contact) ESD surge protected. Because noisy CAN-Bus connections with unbalanced ground loops could seriously damage the equipment, an ISO version is available and offers 2.5kV electrical isolation.

USB Interface

USB-Input	USB 2.0 Full Speed, USB 1.1 compliant
Connector	USB type B
Driver	Virtual COMs, 3Mbit/s max
Operating Systems	• Windows 2000 up to Windows 10 • Windows Server 2000 up to 2012 • Linux kernel 2.6+ • Mac OS X support available
Installation	The driver is already installed (Linux), or installs by automatic Download after Device connection (Windows).

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CAN Bus

No. of Ports/Type	1 × CAN Bus
Connector	DB9 male
Protection	• 16kV ESD surge protection • 2.5kV Electrical isolation on ISO version
Signals	CAN_H, CAN_L, CAN_GND
Speed	CAN 2.0A / 2.0B 1Mbit/s
Controller	SJA1000 (NXP)
Transceiver	SN65HVD233 (Texas Instruments)
LED	CAN-Data, CAN-Error

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Software

VSCAN API	• Unified API for control all VScom CAN-Adapters. • Supported OS: Windows, CE, Linux (x86, x86-64, ARM) targets. • Supported Dev.Env: C/C++, C#, VB.NET, Delphi and LabVIEW.
Linux OS	Supports SocketCAN (slcan driver) since kernel 3.4+ Also see this FAQ
CANopen	Open source CANfestival framework fully implements CANopen functionality.
SAE J1939	Automotive protocol suite supported by Vscom's J1939 API. Supports NME200, ISOBUS, MilCAN and FMS protocols for Windows, Linux and **.**NET
Monitoring Tools	Bosch BUSMASTER v3.2.0 and above

Data Coding	ASCII format
CAN Modes	Standard Mode Normal operation on CAN bus Listen Mode Passive receive of CAN Frames, neither ACK bits nor Error Frames are sent Self Reception (Echo Mode) For testing: Transmitted Frames are also received by the adapter

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Power Requirement

Input Voltage	5V (USB)
Power Consumption	max 80mA @ 5V, 400mW
Connector	USB Type B, bus powered, no external supply

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Housing and Mounting

Case	0.8mm sheet metal
Weight	w/o box 150g; w/h box 200g
Dimensions	50×72×22 mm³ (W×L×H) Case 72×72×22 mm³ (W×L×H) with mounting wings
Packaged	85×122×55 mm³
Mounting	• DIN-Rail (optional) • Wall mount

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Environmental Data

Operating Temp	–25°C - 75°C
Storage Temp	–30°C – 85°C
Ambient Humidity	5-95% non condensing

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Standards

Declarations	CE, FCC
EMI	• EN 55022 Class B • 47 CFR FCC Part 15 Subpart B
EMS (EN 55024)	• EN 61000-4-3: Radiated RFI • EN 61000-4-4: Electrical Fast Transient • EN 61000-4-5: Surge • EN 61000-4-6: Induced RFI • EN 61000-4-8: Power Frequency Magnetic Field • EN 61000-4-11: Power supply dips
ESD	IEC 61000-4-2 4kV contact 8kV air for • CAN Bus Port • USB

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MTBF (Mean Time Between Failures)

MTBF	23 Years at 45°C
Standard	Telcordia (Bellcore) Standard; RelCalc. 5.0 BELL-7

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Warranty

Warranty Period	2 years

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Ordering Information

427	USB-CAN PLUS
430	USB-CAN PLUS ISO

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Options

662	DK 35A DIN-Rail mounting kit
412	Purchase-time option to enable protocol J1939

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Packaging

Packing list

- USB-CAN PLUS
- High-Speed USB cable
- Rubber Feet

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USB-CAN Plus
USB-CAN Plus ISO
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USB-COM Plus Configurator for USB-CAN Plus

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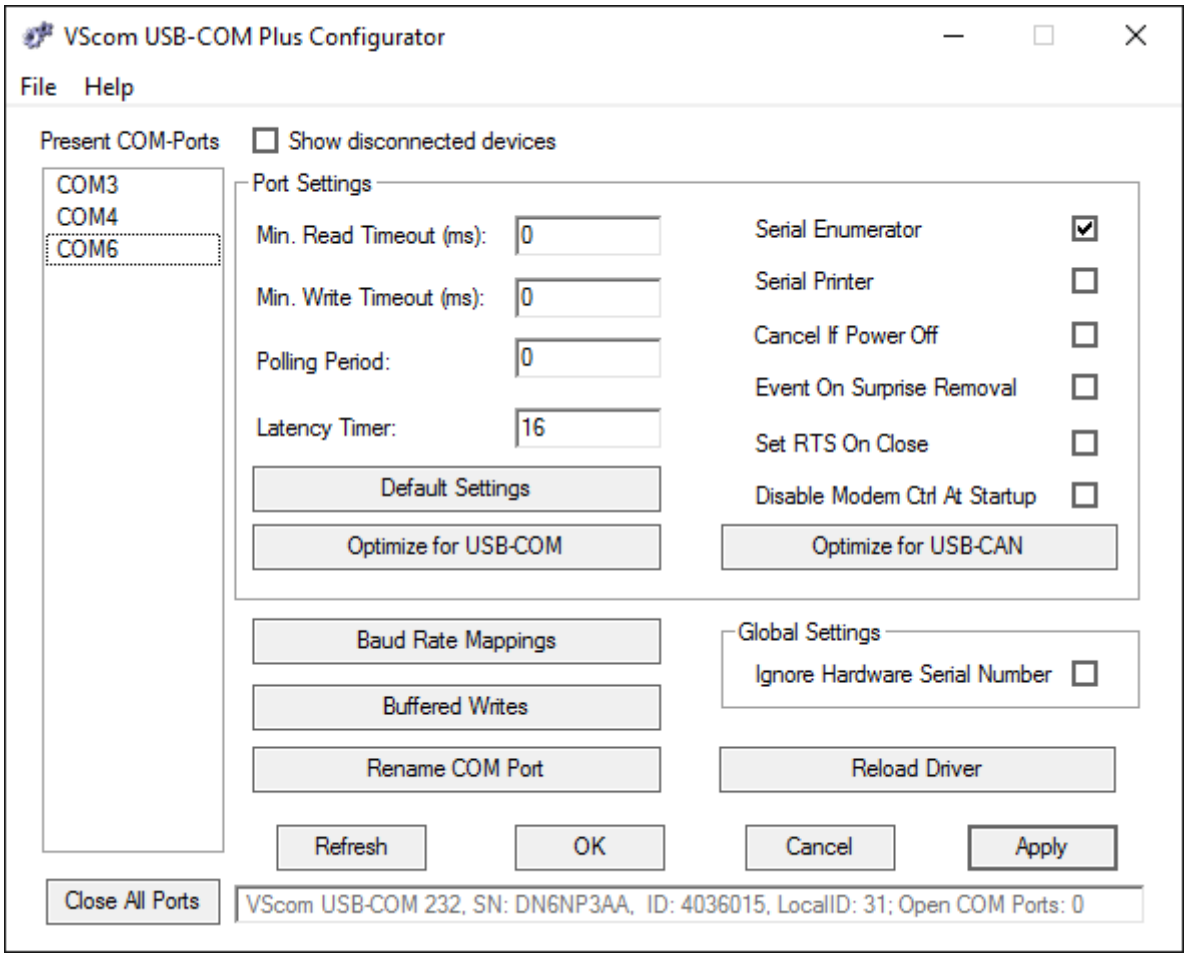

(2021 Mar 19)