VS Vision Systems GmbH / Part Number 432

Model Information

Main Features

- Connects CAN-Bus via mPCIe slot
- USB 2.0 Full Speed signals on mPCIe
- 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

Contact Online...

USB-CAN Plus mPCIe

(Vscom PCI-2CAN)

Quick Link: | Main Features | More Pictures | Overview | CAN | USB | Driver and Software | Power and Environment | Standards | Ordering Information | Options | Packaging |

More Pictures

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Overview

USB-CAN Plus mPCIe is a Mini PCI Express to CAN Bus 2.0A / 2.0B adapter which allows to easily expand any system having a full-length Mini PCIe slot with a CAN-Bus. The mPCIe card uses USB 2.0 signals as provided on the slot. Higher layer protocols, such as CANopen can be assembled using the available development tools for complex automation control applications. Low power consumption (0.4W max.), extended temperature range (−20°C - +70°C), and a solid MTBF (23 Years at 45°C) make it an ideal expansion for industrial automation.

Usage Options

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

- The ASCII conversion protocol is useful in developing and testing any CAN-BUS configurations. Users just connect via virtual COM port having a simple way to talk to the CAN controller. It can also be used to manually transmit and receive CAN frames.
- Applications programmed by users should use the VScan API library (DLL), which transparently handles the communication and ASCII conversion for the CAN frames. Programmers have to handle only the CAN frames and status information, without taking care more about the ASCII conversion in their applications. VScan API is supported in C/C++, C#, VB.NET, Delphi and LabVIEW. Under Linux SocketCAN can be used as alternative to VScan API. All VScom CAN devices support standard Serial Line CAN (slcan) driver.

- USB-CAN Plus series also support CANFestival, an Open Source CANopen Framework. CANopen is a CAN-based higher layer protocol that is used in various application fields 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

For usage in hazardous industrial environments CAN-Bus interface is ±16kV (air) and ±8kV (contact) ESD surge protected.

Expanding countless computing systems

Mini PCI Express slots are present in various Industrial Computers, modern SBCs, Laptops and more. If there is space for the DSub-9 connector and cabling, this product is applicable as CAN-Bus expansion.

CAN	
Speed	CAN High Speed (up to 1Mbit/s) for transmit/receive
Signals	CAN_H, CAN_L, CAN_GND
Protection	Compliant with IEC 61000-4-2 ESD 4kV contact / 8kV air discharge
Controller	SJA1000 (Philips)
Transceiver	SN65HVD233 (Texas Instruments)
LED	CAN Activity (Data) CAN Error
Connector	DB9 male on case Adapter

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USB	
USB-Input	USB 2.0 Full Speed, on Mini PCI Express Slot
Power	Powered by Mini PCI Express slot, max. 120 mA @ 3.3V
Driver	Emulated serial port, 3 Mbit/s
Operating Systems	• Windows 2000 up to Windows 10 • Windows Server 2000 up to 2012 • Linux kernel 2.6+ • Mac OS X support available
LED	CAN Data, CAN Error

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Driver and Software	
Library	• Unified VSCAN API for simple access on all Vscom CAN products. • Supports Windows, CE, Linux (x86, x86-64, ARM) targets. • Supports C/C++, C#, VB.NET, Delphi and LabVIEW.
Linux system	Supports SocketCAN (slcan driver) since kernel 3.4+ Also see this FAQ
Compatibility	Mapper DLLs can simulate software interfaces of CAN adapters from other manufacturers.
CANopen	The library CANFestival implements the CANopen functions. Provided examples show Master/Slave communication
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
Speed	CAN Speed selectable up to 1 Mbit/s
Transfer	ASCII coding mode
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 and Environment

Power	max. 400mW
Power supply	max. 120mA @ 3.3V via slot Mini PCI Express
Dimension	30×51×10 mm³ (W×L×H), Form-Factor long Mini PCI Express
Operating Temp	−20°C - +70°C
Storage Temp	−30°C - +85°C
Weight	20 g

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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	EN 61000-4-2 4kV contact 8kV air for CAN Bus Port

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Ordering Information

432	USB-CAN Plus mPCIe

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Options

412	Purchase-time option to enable protocol J1939

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Packaging

Packing list	• USB-CAN PLUS mPCIe • Connection cable to Adapter • DB9 Adapter

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USB-CAN Plus mPCIe

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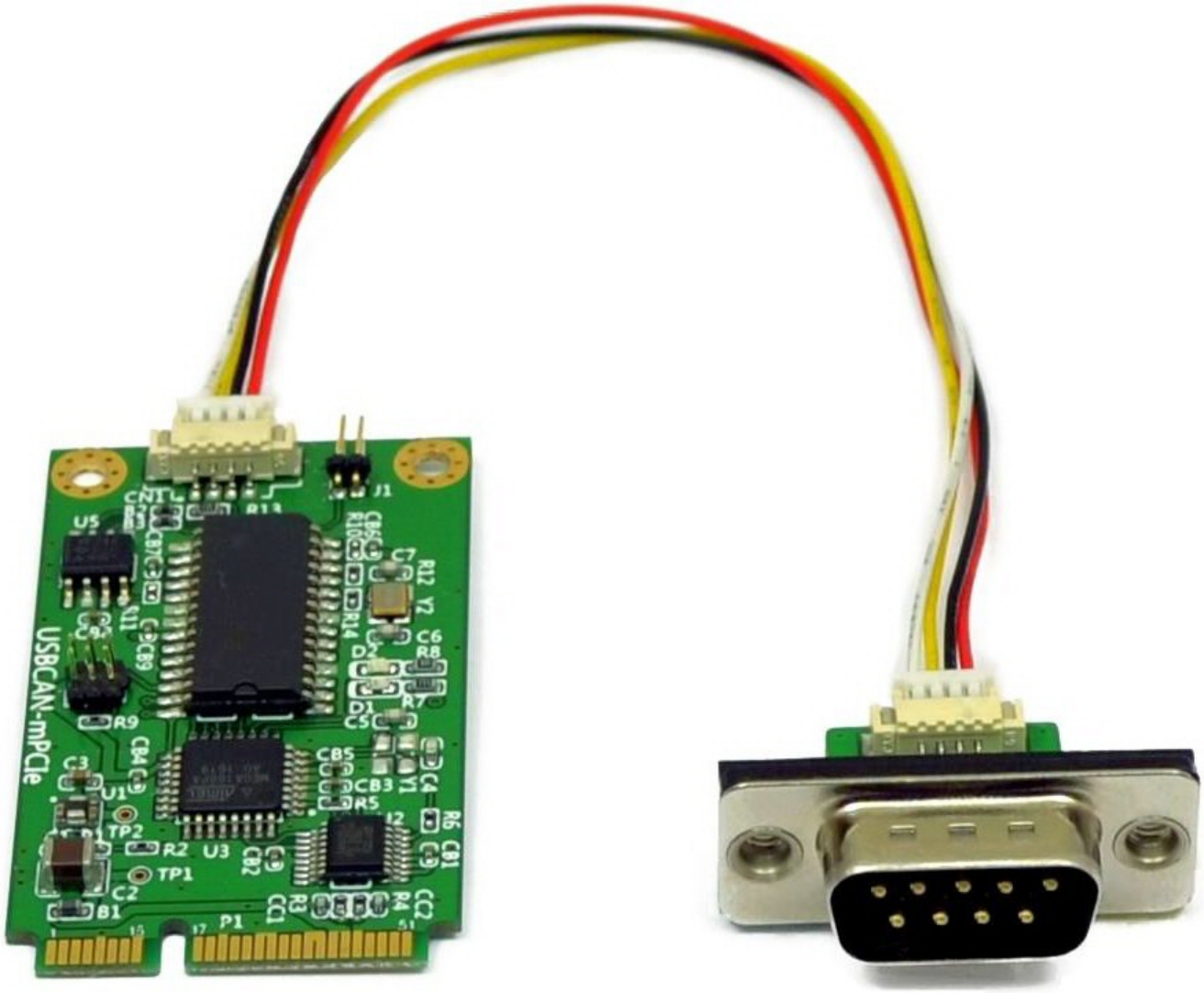

USB-COM Plus Configurator for USB-CAN Plus mPCIe

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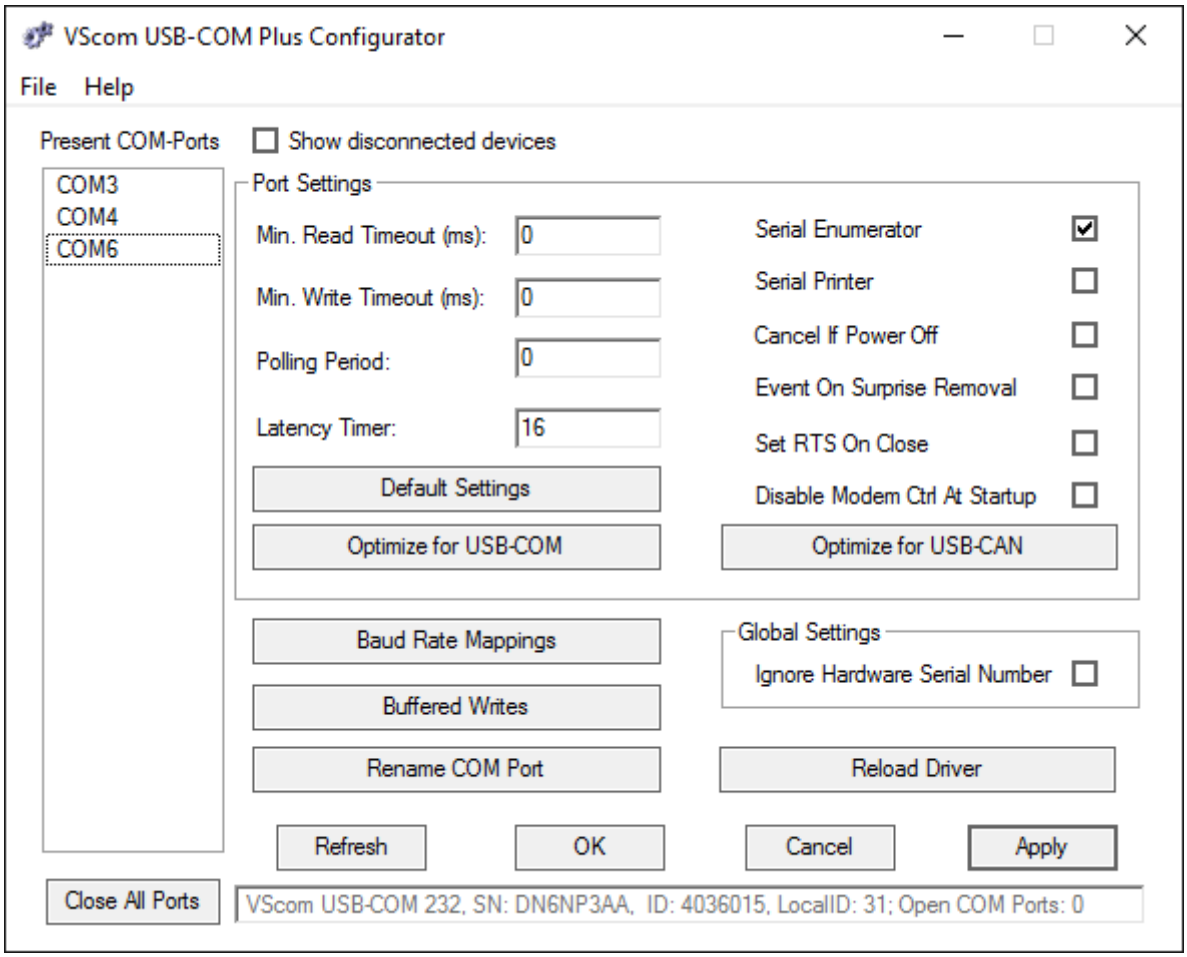

(2021 Mar 19)