

Model Information



■ Features

- Connects a PC to CAN bus via Network
- Supports CAN 2.0A and CAN 2.0B
- CAN High Speed up to 1 MBit/s
- Remote Frame support, Listen only mode
- Supports Windows 2000 to Server 2008 R2, CE
- Supports Linux kernel 2.4.32+
- Supports C/C++, C#, VB.NET, Delphi and LabVIEW
- CANopen supported by CANFestival
- Driver emulates serial port for easy access
- Library (DLL) for standard access
- ASCII conversion protocol via serial port or TCP
- Supports [Bosch Busmaster](#) Debugging
- Metal case

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VScom NET-CAN 110

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■ Overview

The VScom NET-CAN 110 provides CAN-BUS communication over Ethernet. It provides completely secured communication for both data transfer and configuration to the attached CAN devices.

CAN BUS is widely used in industrial applications as well as in automotive monitoring and control. The VScom NET-CAN can be used to monitor the data traffic as well as sending control information.

NET-CAN supports two operating modes: Driver Mode and TCP Raw Server. The Driver Mode basically requires the installation of a virtual com-port driver, which makes the network fully transparent for the application. The TCP Raw Server Mode doesn't require the virtual com-port driver installation, so the communication will be handled directly via IP address and port number. NET-CAN provides different software tools to interface the user application:

- The ASCII conversion protocol is useful in developing and testing any CAN-BUS configuration. Users just open the serial port via a Terminal Program or connect directly via Telnet, and have 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 ASCII conversion for the CAN frames. Programmers have to handle only the CAN frames and status information, they do not have to care more about the ASCII conversion in their applications. This API is supported in C/C++, C#, VB.NET, Delphi and LabVIEW.
- The NET-CAN also supports CANFestival, an Open Source CANopen Framework. CANopen is a CAN-based higher layer protocol that is used in various application fields, such as medical equipment, offroad vehicles, maritime electronics, railway applications or building automation. CANopen unburdens the developer from dealing with CAN-specific details such as bit-timing and implementation-specific functions. It provides standardized communication

objects for real-time data, configuration data as well as network management data.

- CANHacker, a tool for analyzing and transmitting frames on the CAN BUS, is included in the product package.
- A set of Mapper DLLs simulates CAN hardware from other manufacturers. Users configure their system for those products or the NET-CAN 110 adapter as a replacement. So existing software will use the NET-CAN 110 without replacing the application or modifying it.

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■ Application

- Industrial / Factory / Laboratory automation
- SCADA system
- Railway applications
- Maritime electronics
- Wafer fabrication system
- Automotive test equipment
- Medical equipment
- off-road vehicles

■ CAN

Speed	CAN High Speed (20kbit/s up to 1Mbit/s) for transmit/receive
Signals	CAN_H, CAN_L, CAN_GND, CAN_V+, GND
Controller	SJA1000 Philips
Transceiver	TJA1050 (Philips)
LED	CAN activity (Data), CAN Error
Connector	DB9 male

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■ Network

Ethernet interface	Auto-detecting 10BaseT/100BaseTx
Protocols	TCP/IP, Telnet, DHCP, ICMP, HTTP, SNMP v1/2c/3, DNS
Connector	RJ45

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■ Hardware

Processor	ARM 9, 166MHz
Memory	16MB SDRAM, 2MB Flash
LED	Power

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■ Operating Modes

Driver Mode	VScom Driver for <ul style="list-style-type: none">• Windows NT 4.0, 2000, XP up to Windows 7• Windows Server 2000 up to 2008 R2 Driver Mode creates a virtual Com port.
TCP Raw Server	Raw Data transfer over TCP/IP. Accepts multiple incoming connections.
CAN Bridge	CAN networks are connected via TCP/IP (Ethernet). A client connects to a Server, CAN frames received on one network are repeated on the other network.

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■ Special Features

Installation	Configuration utility automatically finds NET-CAN devices in the network
Operating Mode	Automatic Mode switching between Driver and TCP Raw Server Mode.
Configuration	Over Driver Panels, NetCOM Manager, WEB Browser, serial Console, Telnet, SNMP

SNMP	special VScom MIB included
DNS	Domain Name Server support
Firewall	special precautions for Firewall environments
Firmware	Firmware update over WEB Browser, Telnet

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■ Security

Password access	Every capabilities of configuration use the same password including SNMP V3
Secure communication	OpenVPN tunnel provides security on Ethernet. The tunnel protects the configuration as well as all serial data. It is also usable across the Internet. Strong encryption by AES up to 256 bit keys

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■ Driver and Software

Library	<ul style="list-style-type: none"> • Unified 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.
Compatibility	Mapper DLLs can simulate software interfaces of CAN adapters from other manufacturers. At the moment some adapters made by PEAK-System are emulated.
CANFestival	CANopen examples showing Master/slave communication
Speed	CAN Speed selectable up to 1 Mbit/s
Transfer	ASCII coding mode
CAN Modes	<p>Standard Mode Normal operation on CAN bus</p> <p>Listen Mode Passive receive of CAN Frames, neither ACK bits nor Error Frames are sent</p> <p>Self Reception (Echo Mode) For testing: Transmitted Frames are also received by the adapter</p>
Monitoring Tools	<ul style="list-style-type: none"> • VScom NET-CAN 110 is supported by Bosch BUSMASTER • VScom NET-CAN 110 is supported by CANHacker

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■ Power and Environment

Power requirments	9 -30V DC, 500mA, 12V
Power supply adapter	12V DC, 1A connected by terminal Block
Dimension	73×115×27 mm ³ (W×L×H) 101×121×27 mm ³ with DB9 connector and DIN rail mounting kit
Operating Temp	0°C - 60°C
Storage Temp	-20°C - 85°C
Case	SECC sheet metal 1mm
Weight	0.2kg

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■ Ordering Information

Art. No.	422
Product Name	NET-CAN 110

Packing list

- NET-CAN 110
- Power supply adapter 12V, 1000mA
- CD-ROM with Driver and configuration software
- Printed Quick Installation Guide

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