Model Information

Features

- Connects a PC to CAN bus via Ethernet, WLAN and Internet
- Supports CAN 2.0A and CAN 2.0B
- CAN High Speed up to 1 MBit/s
- **New:** Secure Remote Access by **viaVPN**
- USB expansion port for WLAN
- LAN 1000/100/10 Ethernet auto-detect
- Remote Frame support, Listen only mode
- CAN Bridge operation
- Supports Windows 2000 to Server 2012, CE
- Supports Linux (x86, x86-64, ARM)
- 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 TCP/IP
- Supports Bosch Busmaster Debugging
- Option: Wireless network IEEE 802.11b/g/n
- Metal case

Contact Online...

VScom NetCAN Plus 110

(Net-CAN 110)

Quick Link: | Features | More Pictures | Overview | Application | CAN | Network | Remote Access | Operating Modes | Special Features | Security | Driver and Software | Power and Environment | Standards | Ordering Information | Options | Packaging |

More Pictures





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Overview

The VScom NetCAN+ 110 is an easy to use gateway from Ethernet to CAN-Bus, based on state of the art RISC components. It provides CAN-BUS communication over Ethernet and WLAN, and allows 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 NetCAN+ can be used to monitor the data traffic as well as sending control information.

Implemented in the NetCAN+ is an option to use **the viaVPN system** for Remote Access and Monitoring. **viaVPN** provides secure and strong encrypted access via Internet, without any re-configuration of firewalls. Once installed in the local network the NetCAN+ are used exactly as without the option viaVPN. But at the same time the operation can be monitored from remote locations. If the CAN port is not occupied by local access, also operation from remote is possible.

NetCAN+ supports three operating modes: TCP Raw Server, CAN Bridge and Driver Mode. With TCP Raw Server the communication is handled directly via IP address and port number. The CAN Bridge connects two NetCAN+ devices to tunnel CAN data via Ethernet/WLAN. The Driver Mode requires the installation of a virtual com-port driver, which makes the network fully transparent for the application. NetCAN+ provides various software tools to interface the user application:
• The ASCII conversion protocol is useful in developing and testing any CAN-BUS configuration.

Users just 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.
• In Linux SocketCAN can be used as alternative to vs_can_api library. VScom CAN devices support standard Serial Line CAN (slcan) driver (see this FAQ).
• The NetCAN+ 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. This requires the Driver Mode.
• A set of Mapper DLLs simulates CAN hardware from other manufacturers. Users configure their system for those products or the NetCAN+ 110 adapter as a replacement. So existing software will use the NetCAN+ without replacing the application or modifying it.

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
Connector	DSub9 male
LED	CAN activity (Data), CAN Error

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Network

Ethernet interface	Auto-detecting 1000BaseT/100BaseTx/10BaseT (GigaLAN) Connector 8P8C (RJ45)
Wireless interface	Optional via internal module or external USB stick IEEE 802.11b/g/n operation in Access Point or Client Mode
Connector type	SMA-Reverse for WLAN antenna
Protocols	TCP/IP, Telnet, DHCP, ICMP, HTTP, SNMP v1/2c/3, DNS
USB port	USB 2.0 High Speed, for WLAN
LED	Ethernet Link+Speed, WLAN

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Remote Access

Connect via Internet	The **system viaVPN** provides secure and easy access to remotely installed devices. The installation is quickly done and provides convenient tools to get access from all locations
Security	All connections use VPN-tunnels encrypted by SSL and AES-256. And even when remote access to a NetCom Plus Server is possible, this does not provide access to the network the Server is installed in.
Firewall friendly	Access to the viaVPN Cloud Servers is done like https protocol in a browser. If web pages can be viewed from a location, access to the Cloud is also possible. No re-configuration of firewalls required.

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Operating Modes

TCP Raw Server	Raw Data transfer over TCP/IP. Accepts multiple incoming connections.

CAN Bridge	CAN networks are connected via TCP/IP (WLAN or Ethernet). A client connects to a Server, CAN frames received on one network are repeated on the other network.
Driver Mode	VScom Driver for • Windows 2000, XP up to Windows 8.1 • Windows Server 2000 up to 2008 R2 Driver Mode creates a virtual Com port.

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Special Features

Installation	Configuration utility automatically finds NetCAN 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 in Driver Mode
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 WLAN and Ethernet. The tunnel protects the configuration as well as all serial data. It is also usable across the Internet. Strong encryption by SSL-AES up to 256 bit keys

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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 2.6.38+ 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
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
Monitoring Tools	• NetCAN+ and VSCAN API are supported by Bosch BUSMASTER • NetCAN+ is supported by CANHacker via Driver Mode

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Power and Environment

Connector	3-pin Terminal Block with Protective Earth

Power requirements	9 - 54V DC, 0.3A @ 12V, 4W
Dimension	115×73×25 mm³ (W×L×H)
Operating Temp	−20°C - 65°C
Storage Temp	−20°C – 85°C
Case	SECC sheet metal (1mm)
Weight	0.25kg
Mounting	• DIN-Rail (optional) • Wallmount (optional)

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Standards

Declarations	CE, FCC
EMI	• EN 55022 Class B • EN 61000-3-2: Limits of harmonic current emissions • EN 61000-3-3: Limitation of voltage changes • 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 • USB • Ethernet • DC Power connector

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Ordering Information

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Options

6679	Activate option **viaVPN**
6689	WLAN Kit internal internal module 802.11b/g/n, pigtail and antenna Purchase time option, not for later retrofitting
6690	WLAN Kit external USB stick 802.11b/g/n, antenna
6031	Power supply adapter 12V DC, 1A
6692	DK-NCP DIN-Rail mounting kit
6693	WK-NCP Wallmount kit

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Packaging

Packing list	• NetCAN Plus 110 • Terminal block for Power Supply • CD-ROM with Driver and configuration software

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VScom NetCAN Plus 110

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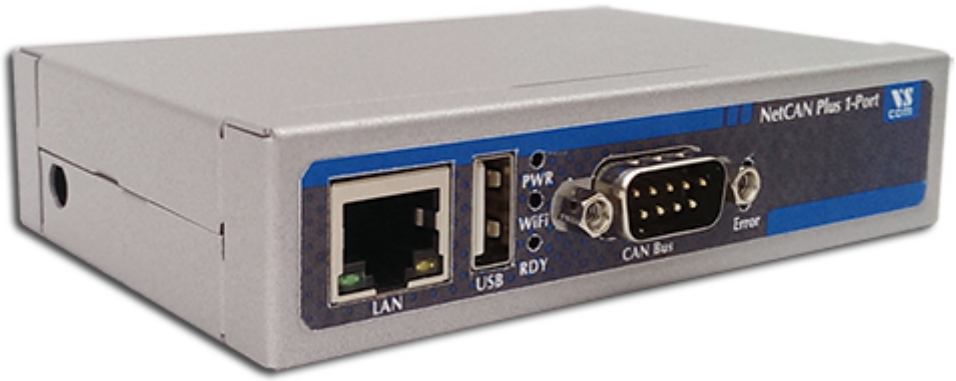

DIN-Rail Mounting Kit

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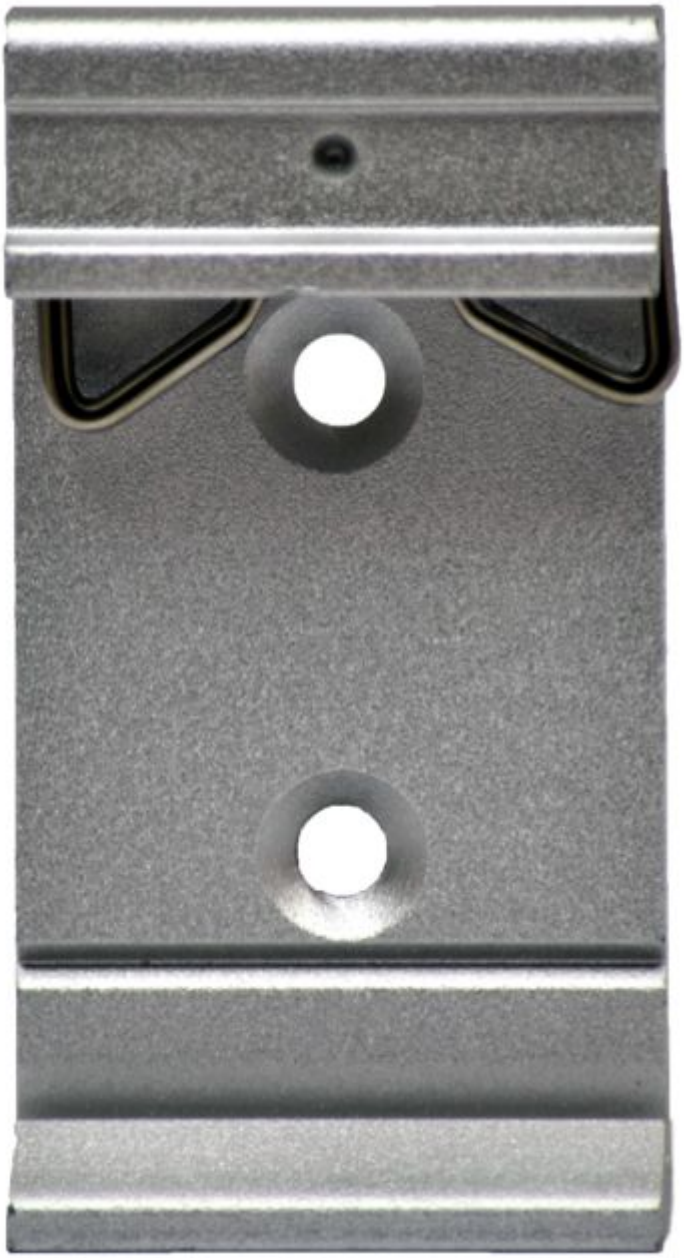

Wall Mounting Kit

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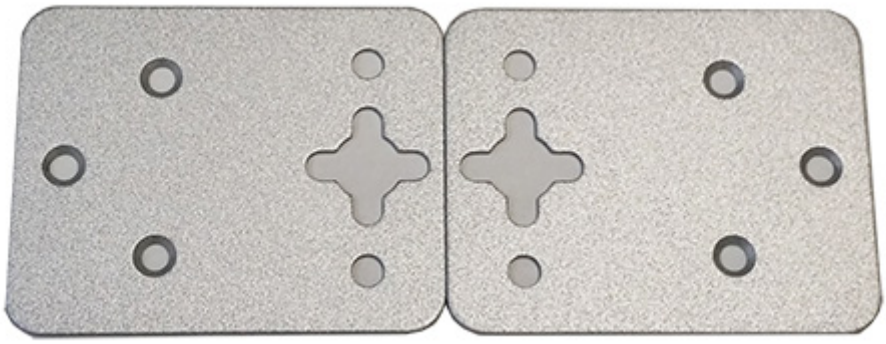

NETCAN on DIN-Rail

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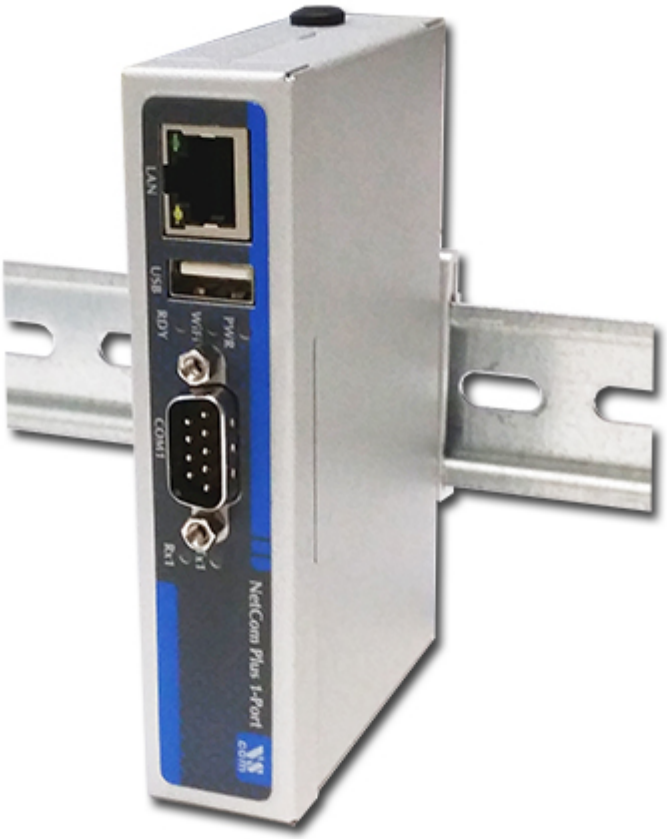

Remote Access option

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viaVPN®