VS Vision Systems GmbH / Part Number 434

Model Information

Main Features

- Connects CAN-Bus via LAN to PC
- Supports CAN 2.0A / 2.0B at 1MBit/s
- LAN 100/10 Ethernet auto-detect
- CANopen supported by CANFestival
- Bridge mode to tunnel 2 CAN-Busses
- Easy-to-use DLL Library for CAN bus access
- Remote Frame support, Listen only mode
- OS supported: Windows, Linux
- Development: C/C++, C#, VB.NET, LabVIEW, Delphi
- Secure Remote Access by viaVPN Cloud (optional)
- Supports Bosch Busmaster Debugging
- 16kV ESD surge protected
- Wide range power supply 12 - 48V
- Extended temperature −20C - +65°C
- DIN-Rail mountable (optional)

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NetCAN Plus 110A

More Pictures

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Overview

The NetCAN Plus series consists of smart Ethernet to CAN-Bus gateways, making the integration of CAN-Busses into existing Ethernet network topologies possible. Higher layer protocols, such as CANopen, can be assembled using the available development tools for complex automation control applications. Properties such as very low power consumption (2W typical), an extended temperature range (−20C - +65°C) and wide power supply (9 - 48V DC) make it an ideal system for industrial automation.

Operation Modes

NetCAN Plus series supports three operating modes: TCP Raw Server, CAN Bridge and Driver Mode. With the **TCP Raw Server** the communication is handled directly via IP address and port number. The **CAN Bridge** connects two CAN-Busses over an Ethernet/VPN tunnel using two NetCAN Plus devices (**read more ...**). The Driver Mode requires the installation of a virtual com-port driver, which makes the network fully transparent to the application.

Usage Options

NetCAN Plus provides various software tools to interface each level of the user applications:

- The ASCII conversion protocol is handy in developing and testing any CAN-BUS configuration. Users simply connect directly via Telnet, and have a simple 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 VScan API. All VScom CAN devices support the standard Serial Line CAN (slcan) driver.
- The NetCAN Plus series also supports 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.

Secure Remote Access

For the NetCAN Plus series there is a software option using the viaVPN Cloud system (www.viaVPN.com), which can be remotely accessed and monitored over the Internet. viaVPN provides secure and strongly encrypted access, without the need for any reconfiguration of existing firewalls. In case a customer's firmware/application is accessible via Ethernet or Wifi — as for example via a web interface or Telnet/SSH connection — viaVPN extends the access over internet by a protected VPN tunnel. If the CAN-Bus port is not occupied by local access, also remote operation over Internet is possible.

Ethernet Interface

Speed/Type	100Mbps/10Mbps Auto-detecting
Connector	RJ45 (8P8C) 8 pin
LEDs	Power, Ready, Ethernet Link / Speed

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CAN Bus

No. of Ports/Type	1 × CAN Bus
Connector	DB9 male
Protection	16kV ESD surge protection
Signals	CAN_H, CAN_L, CAN_GND
Speed	CAN 2.0A / 2.0B 1Mbit/s
LED	CAN-Data, CAN-Error

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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 Ethernet. A client connects to a Server, CAN frames received on one network are repeated on the other network.
Virtual Com Mode	Driver for virtual COM port available for • Windows 2000, XP up to Windows 10 • Windows Server 2000 up to 2008 R2

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Software

VSCAN API	• Unified API for control of 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 2.6.38+ Also see this FAQ
CANopen	Open source CANfestival framework fully implements CANopen functionality.
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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Installation & Configuration

UPnP	With Network discovery enabled NetCom Plus servers announce their presence via UPnP making their IP visible.
Configuration	• NetCom Manager to find and configure NetCANs in network • Driver Panels, WEB Browser, Serial Console, Telnet, SNMP
Firmware Update	via WEB Browser
Firewall	Virtual-COM mode works through firewalls

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Security

Password Protection	for all available configuration options e.g. via WEB-Browser
Secure Server	create openVPN™ tunnels, for encrypted transmission of all serial and configuration data using high security SSL/TLS standards.

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viaVPN Remote Access (option)

Connect via Internet	viaVPN technology provides easy and secure access to remotely installed NetCom Plus servers for their configuration or for connecting their virtual COM ports through Internet. With the viaVPN option the NetCom Plus servers are no more limited to only work inside of a local network.
Security	All communications use openVPN-tunnels encrypted by SSL/TLS and AES-256 standards.
Firewall friendly	No Reconfiguration of firewalls is required for viaVPN remote access.

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Power Requirements

Input Voltage	9 - 54V DC
Power Consumption	80mA @ 12V, 1W max
Connector	3-pin Terminal Block

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Housing and Mounting

Case	0.8mm sheet metal
Weight	w/o box 0.25kg; w/h box 0.40kg
Dimensions	115×73×25 mm³ (W×L×H)
Packaged	150×107×48 mm³
Mounting	• DIN-Rail (optional) • Wall mount (optional)

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Environmental Data

Operating Temp	−20°C - 65°C
Storage Temp	−20°C – 85°C
Ambient Humidity	5-95% non condensing

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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	IEC 61000-4-2 4kV contact 8kV air for • CAN Bus Port • USB • Ethernet • DC Power connector

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MTBF (Mean Time Between Failures)

MTBF	42.4 Years @ 25°C 13.7 Years @ 45°C
MTBF WLAN model	34.4 Years @ 25°C 12.7 Years @ 45°C
Standard	Telcordia (Bellcore) Standard; RelCalc. 5.0 BELL-7

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Warranty

Warranty Period	2 years

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Open Source Software

Licenses	This product uses open source software to fulfill part of its functions. Licenses for the open source software are granted under the GNU General Public License in various versions. For details about those see the information in the firmware download and visionsystems.de/opensource

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Ordering Information

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Options

6031	Power adapter 110-230V AC to 12V @1A, DC, EU plug
6034	Power adapter 110-230V AC to 12V @1A, DC, US plug
6679	Activate option viaVPN for secure remote access over Internet
6692	DK-NCP DIN-Rail mounting kit (clamp on rear side)
6693	WK-NCP Wallmount kit
662	DK 35A Plastic DIN-Rail mounting kit (use with 6693)
6064	DB9F-to-TB/10 for CAN bus free wiring option

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Packaging

Packing list	• NetCAN Plus CAN Bus Gateway • Terminal block for Power Supply

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DIN-Rail Mount Kit DK-NCP

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DK-NCP on case

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Wall Mount Kit

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DK-NCP: NETCAN on DIN-Rail

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DSK-NCP: Side-mount on DIN-Rail

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Remote Access option

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(2025 Aug 22)