

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
- WLAN 802.11b/g/n (WLAN model only)
- CANopen supported by CANFestival
- SAE J1939 protocol supported by VScom's J1939 API
- 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, Windows CE
- 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 9 - 54V
- Extended temperature -20C - +65°C
- DIN-Rail mountable (optional)

[Contact Online...](#)

NetCAN Plus 120 WLAN (Net-CAN 110, Net-CAN 120 WLAN)

Quick Link: | [Main Features](#) | [More Pictures](#) | [Overview](#) | [Ethernet Interface](#) | [CAN Bus](#) | [Operating Modes](#) | [Software Installation & Configuration](#) | [Security](#) | [viaVPN Remote Access \(option\)](#) | [Wireless interface \(WLAN model only\)](#) | [Power Requirements](#) | [Housing and Mounting](#) | [Environmental Data](#) | [Standards](#) | [MTBF \(Mean Time Between Failures\)](#) | [Warranty](#) | [Ordering Information](#) | [Options](#) | [Packaging](#) |

■ More Pictures



Click on the thumbnails for the large picture ...

[>Back to top](#)

■ 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 low power consumption (2W typical), an extended temperature range (-20C - +65°C), a wide power supply (9 - 54V DC) and a solid MTBF (17 Years at 45°C) make it an ideal system for industrial automation. The Wireless LAN also supports connections from PC to the NetCAN Plus without an existing Wifi network.

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/WLAN tunnel using two NetCAN Plus devices. 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.
- 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

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, WLAN, Ready, Ethernet Link / Speed

[>Back to top](#)

■ 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

[>Back to top](#)

■ 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.
Virtual Com Mode	Driver for virtual COM port available for <ul style="list-style-type: none"> • Windows 2000, XP up to Windows 10 • Windows Server 2000 up to 2008 R2

[>Back to top](#)

■ Software	
VSCAN API	<ul style="list-style-type: none"> • 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 2.6.38+ 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
>Back to top	
■ Installation & Configuration	
UPnP	With Network discovery enabled NetCom Plus servers announce their presence via UPnP making their IP visible.
Configuration	<ul style="list-style-type: none"> • 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
>Back to top	
■ 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.
>Back to top	
■ 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.
>Back to top	
■ Wireless interface (WLAN model only)	
Standards	2.4GHz Radio, supports IEEE Std. 802.11b/g/n
WLAN Modes	Access Point (AP) or Client (Station)

TX Power	802.11b: Typ. 15.5dBm ±1.5 dBm @ 1Mbps (DSSS) Typ. 15.5dBm ±1.5 dBm @ 11Mbps (OFDM) 802.11g: Typ. 15.6dBm ±1.5 dBm @ 6Mbps (CCK) Typ. 13.5dBm ±1.5 dBm @ 54Mbps (OFDM) 802.11n: Typ. 13.4dBm ±1.5 dBm @ 6.5Mbps (OFDM) Typ. 13.3dBm ±1.5 dBm @ 150 Mbps(OFDM)
RX Sensitivity	802.11b: -95.6dBm @ 1Mbps, -88dBm @ 11Mbps 802.11g: -91.3dBm @ 6Mbps, -74.2dBm @ 54 Mbps 802.11n: -88.8dBm @ 6.5Mbps (20 MHz), -72dBm @ 72.2Mbps (20 MHz)
Transmission Rate	802.11b: 11Mbps 802.11g: 6 to 54Mbps 802.11n: 6.5 to 150Mbps
Transmission Distance	Up to 100m in open areas
Wireless security	<ul style="list-style-type: none"> • WEP • WPA • WPA2 • WPA2-Enterprise (IEEE 802.1X/RADIUS)
Antenna Connector	RP (Reverse-Polarity) SMA
>Back to top	
■ Power Requirements	
Input Voltage	9 - 54V DC
Power Consumption	0.25A @ 12V, 2.7W max
Connector	3-pin Terminal Block
>Back to top	
■ Housing and Mounting	
Case	0.8mm sheet metal
Weight	w/o box 0.25kg; w/h box 0.40kg
Dimensions	115×73×25 mm ³ (W×L×H)
Packaged	150×107×48 mm ³
Mounting	<ul style="list-style-type: none"> • DIN-Rail (optional) • Wall mount (optional)
>Back to top	
■ Environmental Data	
Operating Temp	-20°C - 65°C
Storage Temp	-20°C - 85°C
Ambient Humidity	5-95% non condensing
>Back to top	
■ Standards	
Declarations	CE, FCC
EMI	<ul style="list-style-type: none"> • 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

[>Back to top](#)

■ 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

[>Back to top](#)

■ Warranty

Warranty Period

2 years

[>Back to top](#)

■ Ordering Information

424

NetCAN Plus 110

[429](#)

NetCAN Plus 120 WLAN

[>Back to top](#)

■ 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

411

Purchase-time option to enable protocol J1939

[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)

[>Back to top](#)

■ Packaging

Packing list

- NetCAN Plus CAN Bus Gateway
- Terminal block for Power Supply
- Reverse SMA Antenna (WLAN model only)

[>Back to top](#)

* Specifications are subject to change without notice.

* All trademarks and brands are property of their rightful owners.

NetCAN Plus 120 WLAN

[>Back](#)



NetCAN Plus 120 WLAN

[>Back](#)



DIN-Rail Mount Kit DK-NCP

[>Back](#)



Wall Mount Kit

[>Back](#)



DK-NCP: NETCAN on DIN-Rail

[>Back](#)



DSK-NCP: Side-mount on DIN-Rail

[>Back](#)



Remote Access option

[>Back](#)



(2018 Mar 20)