

Model Information



■ Main Features

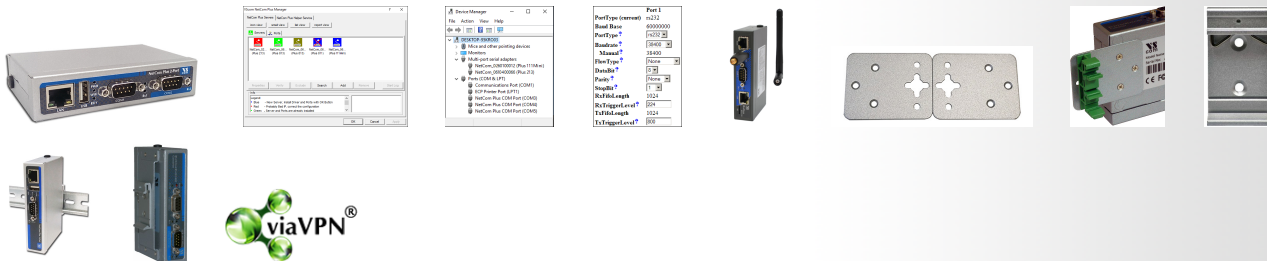
- Ethernet to serial 2 ports RS232/422/485
- Virtual Com Port driver for Windows
- Secure Server with latest SSL/AES-256 encryption
- Operation in Driver Mode, TCP/IP and many other
- Quick Configuration over Driver and Browser
- ESD protection on serial port, Ethernet, DC power
- DIN Rail and Wall mount options
- Optional: Wireless network IEEE 802.11b/g/n
- Port expansion over USB

[Contact Online...](#)

NetCom Plus 213

Quick Link: | [Main Features](#) | [More Pictures](#) | [Overview](#) | [Ethernet Interface](#) | [Serial Interface](#) | [Serial Port Expansion](#) | [Software](#) | [Installation & Configuration](#) | [Security](#) | [viaVPN Remote Access \(option\)](#) | [Wireless interface \(option\)](#) | [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 Ethernet to Serial Gateways NetCom Plus connect RS232 or RS485 devices to a network running TCP/IP. These Serial Device Servers are rugged industrial devices with metal case and DIN-Rail or wall mounting, further supported by ESD protection on serial ports, power input and USB. The NetCom+ 213 provides two RS232/422/485 ports.

Windows Driver installs Com Ports

The driver for Windows operating system installs Virtual Com Ports. These operate in the same way as built-in ports, but via Ethernet or optional WLAN 802.11b/g/n. Easy-to-use Installation and Management software guides users through the configuration.

High Speed Serial Ports, Low Power

The serial ports allow data rates of up to 3.7Mbps in RS422/485 or 1000kbps in RS232 modes. The ports also allow every non-standard bitrate up to 150kbps, and many more (e.g. 1Mbps). See [FAQ](#). The USB 2.0 port supports [USB-COM Plus modules](#), to add more standard or isolated serial ports. The USB port may also connect external WLAN.

The gateways demand 4W of power or less. The flexible input allows for various sources of customers choice.

Easy Configuration, versatile Operation Modes

NetCom+ are configured over Driver Panels and WEB Browser. This is also possible via serial Port, Telnet or SNMP. NetCom+ provide Driver Mode, TCP/IP or UDP connection, and many operation modes beyond those.

Secure Remote Access for Monitoring

For NetCom Plus series there is a software option using the viaVPN Cloud system (www.viaVPN.com) to be remotely accessed and monitored over Internet. viaVPN provides secure and strongly encrypted access, without any reconfiguration of existing firewalls. The access to the firmware via Ethernet or WLAN is extended by viaVPN over Internet, protected by a VPN tunnel. If the Com 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](#)

■ Serial Interface

No. of Ports/Type	2 × RS232/422/485 selected by DIP-switch or software
Connector	DB-9 male
Protection	16kV ESD surge protection
Operating Modes	<ul style="list-style-type: none"> • RS232 • RS422 full duplex (120Ω on/off) • RS485 4 wire, full duplex (120Ω on/off) • RS485 2 wire, half duplex (120Ω on/off)
Configuration	<p>One DIP switch sets operating mode and RS422/485 termination</p> <p>Software can configure the ports individually</p> <p>No High/Low biasing resistors needed</p>
Signals	<ul style="list-style-type: none"> • RS232: TxD,RxD, RTS,CTS, DTR,DSR, DCD, RI, GND • RS422: Tx+/-, Rx+/-, GND • RS485 4 wire: Tx+/-, Rx+/-, GND • RS485 2 wire: Data+/-, GND
RS485 Data Direction Control	ARTc (Automatic Receive Transmit control)
Data bits	5, 6, 7, 8
Stop bits	1, 2
Parity	None, Even, Odd, Mark, Space
Flow Control	RTS/CTS, XON/XOFF
Baudrate	<ul style="list-style-type: none"> • RS232: 180bps - 921.6/1000kbps • RS422: up to 3.7Mbps • RS485: up to 3.7Mbps <p>Supports non-standard baudrates</p>
LEDs	TxD/RxD for each port

[>Back to top](#)

■ Serial Port Expansion

Connector	USB 2.0 High Speed type A, 500mA @5V at front side
Expansion Options	Connect USB-COM Plus (1 port) or USB-2COM Plus (2 ports) devices to add more serial ports to NetCom Plus server, even electrically isolated versions

[>Back to top](#)

■ Software

Network Protocols	TCP, UDP, Telnet, PPP, DHCP, ICMP, UPnP, HTTP, LPD, SNMP V1/2c/3, DNS, openVPN
Virtual-COM Mode	Driver creates virtual COM ports via NetCom protocol © for Windows XP/7/8/10, Win-Server 2003 to 2008 R2 (x86/x64)
Socket Modes	TCP RAW Server, TCP RAW Client, UDP Mode, Print Server Automatic switching between Virtual-COM and TCP-RAW Server modes.
Tunnel Modes	Null Modem Tunnel and IP Modem
Fixed TTY Drivers	socat Tool, Linux OS

[>Back to top](#)

■ Installation & Configuration

Installation

NetCom Plus Manager automatically finds NetCom Plus devices in the local network.

UPnP

With Network discovery enabled NetCom Plus servers announce their presence via UPnP making their IP visible.

Configuration

via WEB-Browser, Driver Panels, NetCom Manager, serial console, Telnet console or SNMP

Firewall

Virtual-COM mode works through firewalls

Firmware Update

via WEB Browser

[>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 (option)

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

- 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, 2.8W 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 0.35kg	
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)	<ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Serial Ports USB Ethernet DC Power connector 	>Back to top
■ MTBF (Mean Time Between Failures)		
MTBF	40.1 Years @ 25°C 13.3 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		
6655	NetCom Plus 213 (2x RS232/422/485, expandable)	>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
6689	WLAN Kit internal internal module 802.11b/g/n, pigtail and antenna Purchase time option, not for later retrofitting
6692	DK-NCP DIN-Rail mounting kit (clamp on rear side)
6693	WK-NCP Wallmount kit
662	DK 35A Plastic DIN-Rail mounting kit
663	DB9F-to-TB/5Pins for free wiring option
6061	DB9F-to-RJ45 for changing from DB9 to CAT5 wiring (Optimised for RS422/485 operating modes)
6062	RJ45-to-DB9M for changing back from CAT5 to DB9 wiring (Required to match the DB9 pinout at NetCom Plus)
661	Serial Null-Modem adapter 9PF-9PF, change male to female
>Back to top	

■ Packaging

Packing list

- NetCom Plus Serial Device Server
- Terminal block for Power Supply

[>Back to top](#)

- * Specifications are subject to change without notice.
- * All trademarks and brands are property of their rightful owners.

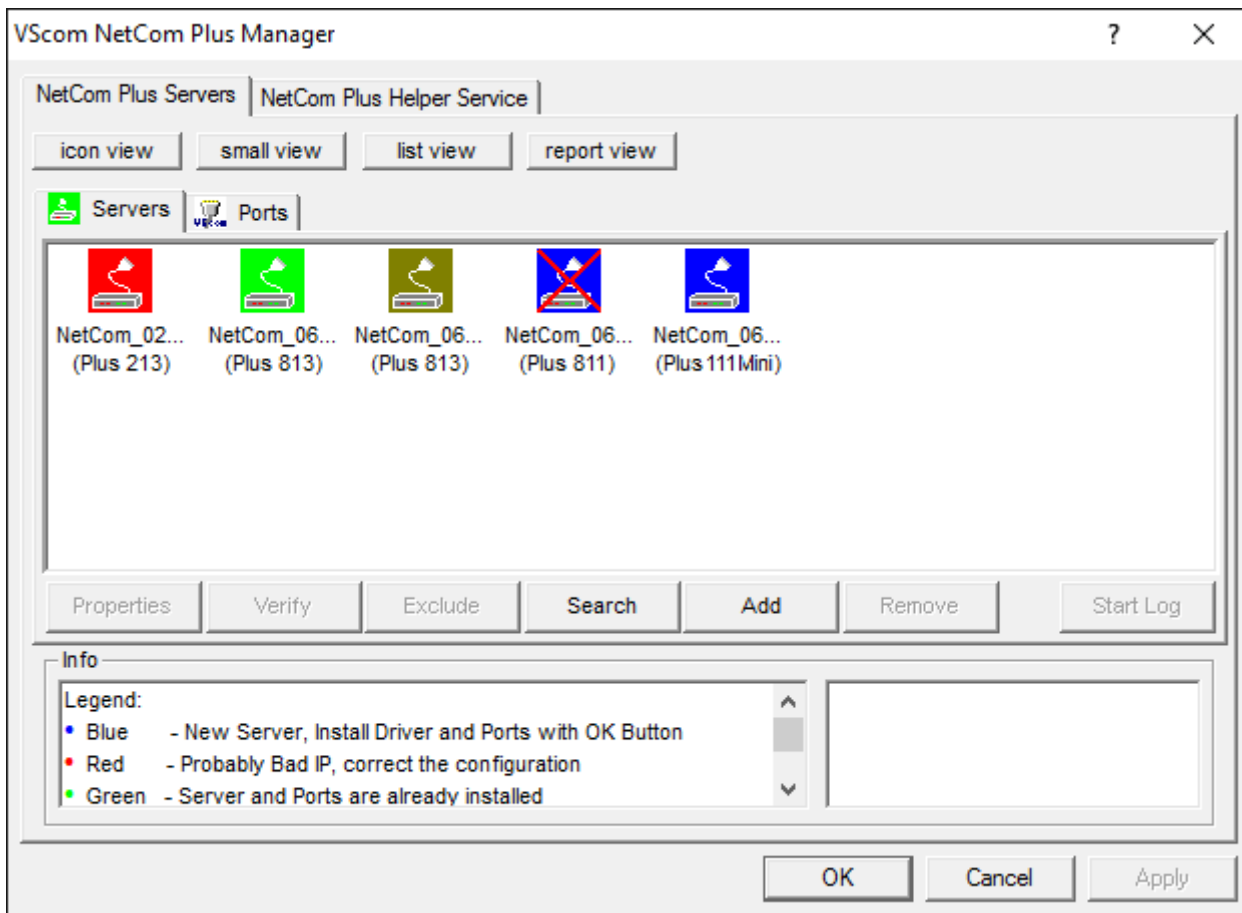
NetCom Plus 213

[>Back](#)



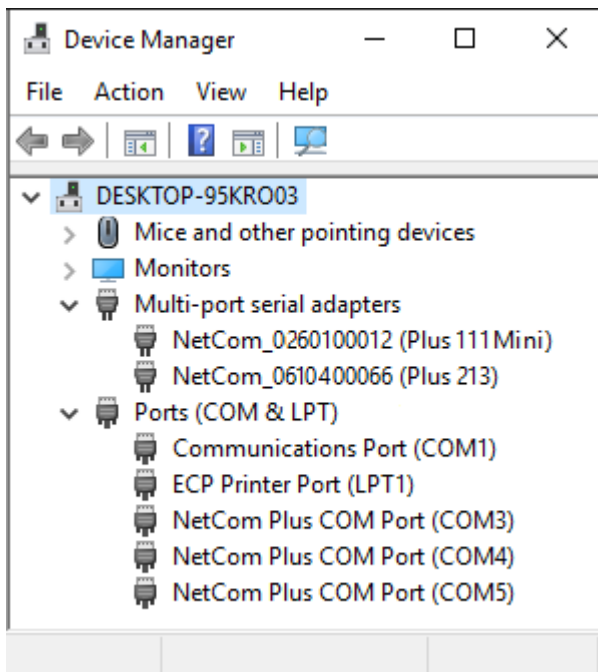
NetCom Plus Manager

[>Back](#)



NetCom Plus in Device Manager

[>Back](#)



Serial Port in Web Interface

[>Back](#)

Port 1	
PortType (current)	rs232
Baud Base	60000000
PortType ?	<input type="text" value="rs232"/>
Baudrate ?	<input type="text" value="38400"/>
Manual ?	38400
FlowType ?	<input type="text" value="None"/>
DataBit ?	<input type="text" value="8"/>
Parity ?	<input type="text" value="None"/>
StopBit ?	<input type="text" value="1"/>
RxFifoLength	1024
RxTriggerLevel ?	<input type="text" value="224"/>
TxFifoLength	1024
TxTriggerLevel ?	<input type="text" value="800"/>

External WLAN (demonstrated on Baltos iR 2110)

[>Back](#)



Wall Mount Kit
[>Back](#)





DIN-Rail Kit DK-NCP

[>Back](#)



DK-NCP: NetCom on DIN-Rail

[>Back](#)



DSK-NCP: Side-mount on DIN-Rail
[>Back](#)



Remote Access option
[>Back](#)



(2018 Jan 17)