

## Model Information



### ■ Features

- Controls 2 RS232/422/485 devices located virtually anywhere via Ethernet, WLAN or Internet
- Easy selection of RS232, RS422 or RS485 by single DIP switch or individually by software
- Port expansion over USB A connector
- LAN 1000/100/10 Ethernet auto-detect
- NetCom Manager automatically finds NetCom+ devices in the network
- Configuration over Driver Panels, serial Port, Telnet, WEB Browser, SNMP
- Automatic mode switching between Driver and Raw Mode
- Supports TCP/IP, UDP, Telnet, DHCP, ICMP, HTTP, SNMP V1/2c/3, DNS, PPP, openVPN
- SSL/AES-256 encryption on Ethernet, WLAN and Internet
- Optional: Wireless network IEEE 802.11b/g/n

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# NetCom Plus 213

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### ■ Overview

The NetCom+ 213 is an industrial-strength network-based serial device servers for connecting two RS232 devices (or RS485 communication lines) like CNC, PLC, weighting scale, scanner and others directly to a network running TCP/IP. The driver for Windows operating system installs Virtual Com Ports. The network is Gigabit Ethernet or optionally wireless by WLAN 802.11b/g/n.

The NetCom+ Servers use a state-of-the art RISC processor for low power and cost effective design. The 1 and 2 port models are very similar, including the case size. Power supply is via DC adapter. The serial ports enable 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 above that (e.g. 1Mbps). See the [FAQ](#).

The USB 2.0 port supports [USB-COM Plus modules](#), to add more non-isolated and also isolated serial ports. The USB port may also connect external WLAN.

NetCom+ can be configured over Driver Panels, WEB Browser, serial Port, Telnet, SNMP and serves as a transparent serial channel without platform and distance limitation.

As modern devices the NetCom+ provide encryption for all communication.

### ■ Application

- Secure Remote Monitoring
- SCADA system
- Industrial / Factory / Laboratory automation
- Automatic warehouse control system

- Building automation system
- Self-service banking system

- Wafer fabrication system
- Other remote and distributed serial devices control

## ■ Interface

|                           |  |
|---------------------------|--|
| <b>Ethernet interface</b> | Auto-detecting 1000BaseT/100BaseTx/10BaseT (GigaLAN)<br>Connector 8P8C (RJ45)  |
| <b>Wireless interface</b> | Optional via internal module or external USB stick<br>IEEE 802.11b/g/n operation in Access Point or Client Mode  |
| <b>Protocols</b>          | TCP/IP, UDP, Telnet, PPP, DHCP, ICMP, HTTP, LPD, SNMP V1/2c/3, DNS, openVPN  |
| <b>No. of serial port</b> | 2x DSUB 9 male connector (as PC)<br>Expandable by <a href="#">USB-COM Plus modules</a>   |
| <b>Serial interface</b>   | RS232/422/485 individually selected by software or common by DIP-switch  |
| <b>Available Modes</b>    | <ul style="list-style-type: none"> <li>● RS232 full duplex</li> <li>● RS422 full duplex (120Ω on/off)</li> <li>● RS485 4 wire, full duplex (120Ω on/off)</li> <li>● RS485 2 wire, half duplex (120Ω on/off)</li> </ul> Internal Termination, controlled by operation mode<br>BIAS resistors not required |
| <b>Signals</b>            | <ul style="list-style-type: none"> <li>● RS232: TxD,RxD, RTS,CTS, DTR,DSR, DCD, RI, GND</li> <li>● RS422: Tx+/-, Rx+/-, GND</li> <li>● RS485 2 wire: Data+/-, GND</li> <li>● RS485 4 wire: Tx+/-, Rx+/-, GND</li> </ul>  |
| <b>RS485 Data control</b> | Controlled by ART (Automatic Receive Transmit control)   |
| <b>USB port</b>           | USB 2.0 High Speed, for WLAN and serial port expansion   |

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## ■ Serial Performance

|                  |   |
|------------------|---|
| <b>Speed</b>     | RS232: 200 bps to 921.6/1000 kbps<br>RS422/485: 200 bps to 3.7Mbps<br>Supports non-standard baudrates |
| <b>Parity</b>    | None, even, odd, mark, space  |
| <b>Data bits</b> | 5, 6, 7, 8  |
| <b>Stop bits</b> | 1, 2  |

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## ■ Operating Modes

|                    |  |
|--------------------|--|
| <b>Driver Mode</b> | VScom Driver for Windows up to 10, Server up to 2008 R2, both x86 and x64 Editions.<br>The Driver creates a virtual Com port, using VScom NetCom protocol. |
| <b>Other Modes</b> | TCP Raw Server, TCP Raw Client, Null Modem Tunnel, UDP Mode, Print Server and IP Modem   |

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## ■ Power and Environment

|                           |  |
|---------------------------|--|
| <b>Connector</b>          | 3-pin Terminal Block with Protective Earth |
| <b>Power requirements</b> | 9 - 54V DC, 0.3A @ 12V, 4W                 |
| <b>Dimension</b>          | 115×73×25 mm <sup>3</sup> (W×L×H)          |
| <b>Operating Temp</b>     | -20°C - 65°C                               |
| <b>Storage Temp</b>       | -20°C - 85°C                               |

|                 |  |
|-----------------|--|
| <b>Case</b>     | SECC sheet metal (1mm)   |
| <b>Weight</b>   | 0.25kg   |
| <b>Mounting</b> | <ul style="list-style-type: none"> <li>• DIN-Rail (optional)</li> <li>• Wall mount (optional)</li> </ul> |

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## ■ Standards

|                         |  |
|-------------------------|--|
| <b>Declarations</b>     | CE   |
| <b>Safety</b>           | EN 60950-1   |
| <b>ESD</b>              | <p>EN 61000-4-2 8kV contact 16kV air for</p> <ul style="list-style-type: none"> <li>• Serial Ports</li> <li>• USB</li> <li>• Ethernet</li> <li>• DC Power connector</li> </ul> |
| <b>EMI</b>              | EN 55022 Class A   |
| <b>EMS (EN 55024)</b>   | EN 61000-4-3   |
| <b>Power (EN 55024)</b> | <ul style="list-style-type: none"> <li>• EN 61000-4-4</li> <li>• EN 61000-4-5</li> <li>• EN 61000-4-6</li> </ul>   |

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## ■ Special Features

|                       |   |
|-----------------------|---|
| <b>Installation</b>   | For easy installation the configuration utility NetCom Manager automatically finds NetCom+ devices in the network   |
| <b>Operating mode</b> | Automatic mode switching between Driver and TCP RAW Server mode.  |
| <b>PPP Access</b>     | Dial-In to a modem attached to a serial port using Point to Point Protocol. TCP/IP is transported over the serial line, allowing access to configuration and the serial ports, even without Ethernet. |
| <b>Configuration</b>  | Configuration over Driver Panels, NetCom Manager, WEB Browser, serial console, Telnet, SNMP   |
| <b>Firewall</b>       | Special precautions for Firewall environments   |
| <b>Firmware</b>       | Firmware update over WEB Browser  |
| <b>LEDs</b>           | LEDs for Power, Ready, WLAN, serial Tx, Rx, Ethernet Link, Speed  |

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## ■ Security

|                             |   |
|-----------------------------|---|
| <b>Password access</b>      | Every capabilities of configuration use the same password including SNMP V3   |
| <b>Secure communication</b> | <p><a href="#">OpenVPN™</a> SSL tunnel provides security on Ethernet and Internet. The tunnel protects configuration and serial data, especially convenient to use across the Internet. OpenVPN software is available for many systems, including Windows, Linux and Mac OS. Strong encryption by AES up to 256 bit keys.</p> |

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## ■ Ordering Information

|             |  |
|-------------|--|
| <b>6655</b> | NetCom Plus 213 (2x RS232/422/485, expandable) |
|-------------|--|

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## ■ Options

|  |                   |
|--|-------------------|
|  | WLAN Kit internal |
|--|-------------------|

|                            |  |
|----------------------------|--|
| <b>6689</b>                | internal module 802.11b/g/n, pigtail and antenna<br>Purchase time option, not for later retrofitting |
| <b>6690</b>                | WLAN Kit external<br>USB stick 802.11b/g/n, antenna  |
| <b>6031</b>                | Power supply adapter 12V DC, 1A  |
| <a href="#"><u>661</u></a> | Serial Null-Modem adapter 9PF-9PF, change male to female   |
| <b>6692</b>                | DK-NCP<br>DIN-Rail mounting kit  |
| <b>6693</b>                | WK-NCP<br>Wallmount kit  |

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## ■ Packaging

### Packing list

- NetCom Plus Serial Device Server
- CD-ROM with Driver and configuration software
- Terminal block for Power Supply

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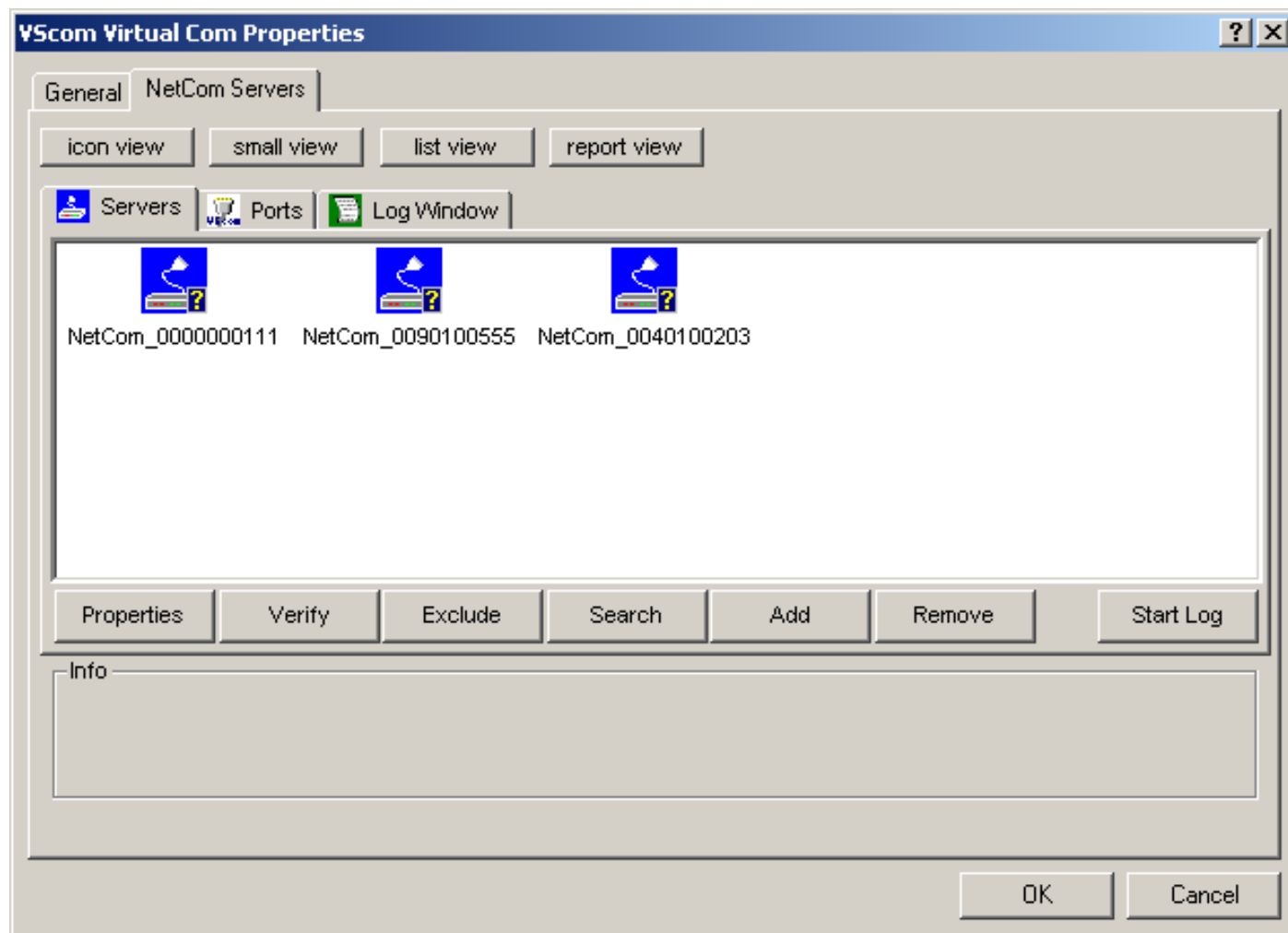
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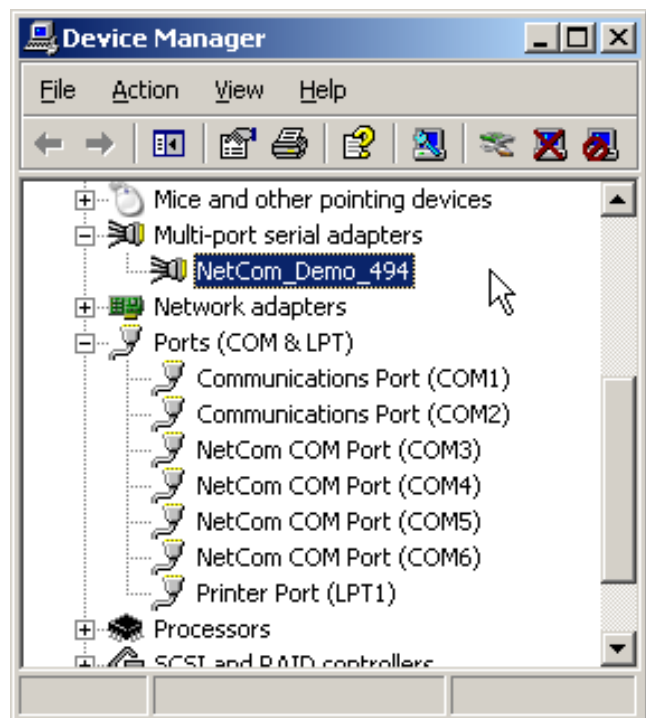
# NetCom Manager

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## NetCom Plus in Device Manager

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## Serial Port in Web Interface

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| 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"/>   |



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## DIN-Rail Mounting Kit

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## Wall Mounting Kit

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NetCom on DIN-Rail

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