

NetCom 211 (RS232 Only)

Features

- 2 x RS232 serial ports
- Control serial devices located virtually anywhere in Ethernet or Internet.
- 10BaseT/100BaseTx autodetect LAN Interface
- TCP Raw Server & Client Mode
- UDP Server / Client Mode
- Null Modem Tunnel to transparently cross the network
- Modem Emulation via network
- Print server mode
- Drivers for Virtual COM supporting Win NT/4.0, 2000, XP/2003, XP/64bits and VISTA. Linux fixed TTY
- Easy Installation and Configuration over WEB Browser, Driver panels, Telnet, SNMP
- Automatic mode switching Driver/Raw Mode and Server/Client Mode



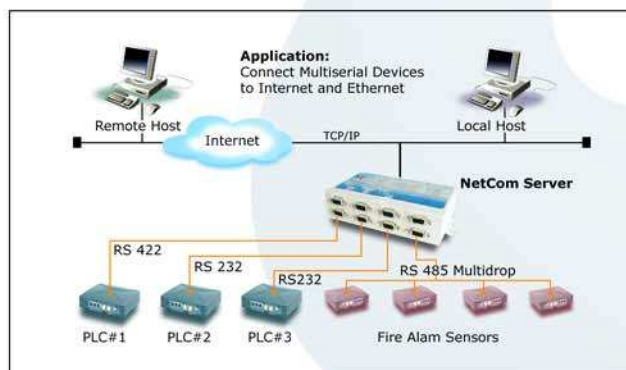
Introduction

NetCom servers are small computers, which allow you to connect existing RS232/422/485 devices to Ethernet and Internet. Netcom servers are equipped with CPU, memory, realtime OS and TCP/IP protocols to bidirectionally translate data between serial interfaces and TCP/IP sockets. NetCom Servers used in Driver Mode make a remote serial port to act as a virtual local COM port.

In this mode your original software application can directly control remotely located devices, such as data collection systems, over network. NetCom servers can easily be configured over WEB Browser, Driver panels, Telnet, serial Port, SNMP. NetCom Servers offer a transparent serial connection without platform and distance limitation.



NetCom Configuration Manager



Applications

- Industrial / Factory / Laboratory automation
- SCADA systems
- Automatic warehouse control systems
- Building automation systems
- Wafer fabrication systems
- Self-service banking systems
- Retail systems
- Data acquisition systems

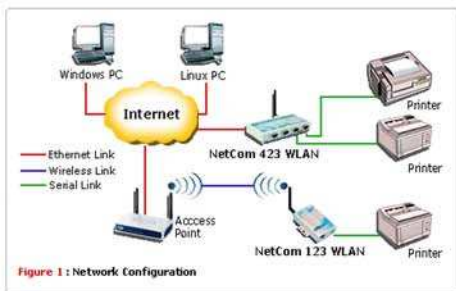


Figure 1 : Network Configuration

Printserver Mode

Sometimes the NetCom Serial Device Servers are used to print on serial printers via a network. So far there have been two ways to achieve this. First the NetCom operates as a TCP Raw Server, and the computer just sends the data via a TCP connection. In the second way a computer running Windows could install the driver for serial ports. The printer is attached to this Virtual Com Port. In both solutions the buffering of data occurred on the computer. Beginning with Firmware Version 2.2 the NetCom Devices offer a true Print Server mode, using the Line Printer Daemon protocol (RFC1197). A print server is a station with one IP Address and a single defined TCP port to accept commands and data for printing. Several printers may be attached to the print server. Each printer has a separate data queue for management of print jobs. The data of the jobs is saved in this queue, not on the client as before.

Operating Modes

The standard TCP Raw and UDP Modes are available to any operating system. Additionally Netcom comes with Com Drivers supporting Windows (NT/4.0, 2000, XP, 2003) and Linux (Fixed TTY) operating systems. After installation of the driver for a Win-OS a Netcom device appears in the Device Manager as VScom Virtual Com. Driver panels offer a feature-rich and easy configuration of all parameters. Netcom drivers establish a transparent connection between host computer and serial device located anywhere on TCP/IP net. Existing software applications directly access the serial device, similar to a local COM port. Specialized applications are supported by the Null Modem Tunnel of NetCom Serial Device Servers. Two serial ports are connected via network, together they simulate a long Null Modem cable. Modem Emulation is provided by IP Modem option. The NetCom "dials" to a second NetCom, both controlled by standard AT-command set on the serial port. A Modem driver file for Windows is provided.



NetCom in Device Manager

Specifications

Hardware

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| Processor | ARM 7 TDMI 50MHz. |
| UART controller | 16C950C/16C550C or compatible. |
| Memory | 8MB SDRAM, 1MB Flash. |
| Connector type | RJ45 for LAN, RJ45 -8pin for serial port. |

Interface

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|-------------------|---|
| LAN interface | 100BaseTx/10BaseT, autodetect. |
| Protocols | TCP/IP, UDP, Telnet, DHCP, ICMP, HTTP, DNS, SNMP V1/2c/3. |
| Serial interface | Max. 460kbps |
| Available Modes | RS232 full duplex. |
| Signals RS232 | TxD, RxD, RTS/CTS, DTR, DSR, DCD, GND |
| Signals RS422/485 | Not available |
| Speed | Total data throughput 4Mbps |
| Parity | None, even, odd, space, mark. |
| Data bits | 5, 6, 7, 8. |
| Stop bits | 1, 1.5, 2. |
| IRQ | None. |
| I/O address | None. |

Operating Modes

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|-----------------------|--|
| Driver mode | Win NT/4.0, 2000, XP/2003, XP/64bits and VISTA Linux Fixed tty. Driver mode creates virtual Com port |
| TCP Raw Server | Raw data transfer over TCP/IP. Waits for incoming connections from host client. |
| TCP Raw Client | Raw data transfer over TCP/IP. Connects to a host server or device waiting for incoming connections. |
| TCP Advanced Settings | Special settings for user-defined modes. |
| UDP Mode | Raw data transfer over UDP. The NetCom is client and server at the same time. With the timeout functionality and a configurable trigger string it can make defined UDP packets of incoming data. |
| Null Modem Tunnel | Connecting two NetCom used as virtual null modem cable. |
| IP Modem | The serial port emulates a standard modem. Operates by AT-commands and dials to IP-Addresses instead of phone numbers. |
| Printserver | The NetCom accepts print jobs and spools them to the attached serial printer |

Power & Environment

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| Power requirements | 9 - 30V DC input, 12V@250mA |
| Power supply Adapter | 9V@500mA |
| Casing | SECC sheet metal |
| Dimension (WxLxH) | 73x115x27 mm ³ case only 101x115x27 mm ³ for DIN rail |
| Operating Temp. | 0~60 degree C |
| Storage Temp. | -20~85 degree C |

Special Features

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| Installation | Configuration utility automatically finds NetCom devices in the network. |
| Operating mode | Automatic mode switching between driver and TCP RAW mode. With TCP advanced settings it is possible to configure the NetCom for using it in multiple modes, so it decides automatically which mode should be used. |
| Configuration | Configuration over Driver Panels, NetCom Manager, WEB browser, serial console, Telnet, SNMP. |
| SNMP | Special VScom MIB included. |
| ART Control for RS485 | Automatic Receive Transmit Control:NO |
| DNS | Domain name server support. |
| Serial interface | Serial interface configurable with external switch. |
| Firewall | Special precautions for firewall environments. |
| Firmware | Firmware update over WEB browser, Telnet, ComPort. |
| LEDs | LEDs for power, Tx, Rx, LAN Link, LAN speed. |

Security

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| Password access | Every capabilities of configuration use the same password including SNMP V3. |
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Approvals

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| EMC | FCC Class A, CE Class A |
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Ordering Information

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| Product name: | NetCom 211 |
| Packing list: | NetCom 211 Power supply adapter 9V@500mA CD-ROM with driver, manual and config. software 2 x RJ45 8-pin to DSUB 9 male RS232 cables 1m Quick installation guide (printed). |