NetCOM
Device Servers

Connect to Success

NetCom 411 (RS232 Only)
NetCom 413 (RS232/422/485)

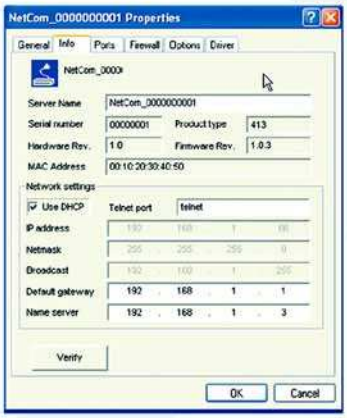
Features

- 4 x RS232/422/485 serial ports selected by switches
- 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

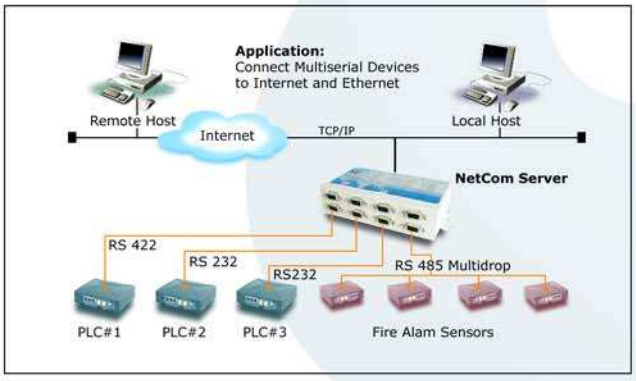
Introduction

NetCom servers are small computers, which allow you to connect existing RS232/422/485 devices to Ethernet and Internet. Netcom servers are equiped 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

VSCOM NetCOM Device Servers

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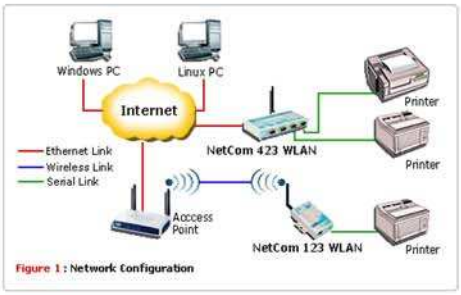

Figure 1 : Network Configuration

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

Processor	ARM 7 TDMI 50MHz.
UART controller	16C950C/16C550C or compatible.
Memory	8MB SDRAM, 1MB Flash.
Connector type	RJ45 for LAN, DB9 female for serial port.

Interface

LAN interface	100BaseTx/10BaseT, autodetect.
Protocols	TCP/IP, UDP, Telnet, DHCP, ICMP, HTTP, DNS, SNMP V1/2c/3.
Serial interface	Max. 921kbps
Available Modes	RS232 full duplex RS422 full duplex RS485 4 wire, full duplex RS485 2 wire, half duplex, with echo RS485 2 wire, half duplex, without echo
Signals RS232	TxD, RxD, RTS/CTS, DTR, DSR, DCD,RI, GND
Signals RS422	Tx+/-, Rx+/-, GND
Signals RS485 2 Wire	Data+/-, GND
Signals RS485 4 Wire	Tx+/-, Rx+/-, GND
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

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

Power requirements	9 - 30V DC input, 12V@400mA
Power supply Adapter	12V@1000mA
Casing	SECC sheet metal
Dimension (WxLxH)	167×99×29 mm³ case only 189×102×30 mm³ for DIN rail
Operating Temp.	0~60 degree C
Storage Temp.	-20~85 degree C

Special Features

Installation	Configuration utility automaticly 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 automaticly 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 or RTS
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

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

Approvals

EMC	FCC Class A, CE Class A

Ordering Information

Product name: **NetCom 411**
Packing list: NetCom 411,
Power supply adapter 12V@1A,
CD-ROM driver, manual config.
software, 4xDB9 Null modem adapters
Quick installation guide (printed).

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Warranty : 3 Years

CE FC