

NP304

4 ports

RS-232 or RS-485/422 serial device server

user manual

【Summary】

4 ports serial device servers which can contact with network fast. it provides one line RS-232/485/422 (RS-232: DB9M: RS-484/422 / 4 bits terminal block) and 1line 10Base-T, it can manage the disperse serial device or host computer by network, easily and convenience. Setting or software upgrade by serial program group in applying. Support TCP, UDP, ARP, ICM and DHCP protocol, support Windows Native COM and auto-contact function once the network intermit.

In addition, 4 ports serial device servers provide the managed collocate tools that based Windows flat roof. it can lead the user manage and configure facility step by step, all of the setting can be done by network or serial .Support pass gateway and router, easily for user to set IP address, Server and Client mode , size of data and so on, Can realize the serial device contact with network by simply setting.

Model name: NP304, NP304-4M

【Package checklist】

While using this converter for the first time, please check whether the packaging is intact, the random attachment is complete at first.

- Serial server
- User manual
- Power adapter 5VDC
- Straight network cable
- Software CD-ROM

The accurate device is put in the apparatus, please pay attention to handling with care, avoid violent vibration, so as not to influence equipment performance. If you find the apparatus has been damaged or lost any part in the course of transporting, please notify the distributor of our company or our company, we will solve properly for you as soon as possible.

【Feature】

- Support RS-232/RS-485/RS-422
- Support Socket application.
- Support Sever and Client mode.
- Support Windows/Linux COM serial driver mode.
- Support TCP, UDP, ARP, ICMP and DHCP protocol
- Support all of Windows Native COM and auto-contact function once the network blackout.
- Support passing gateway and router.
- All of the setting can be done by network and serial
- Proper Serial auto-connection (On-the-fly)

【Capability】

Ethernet port

Standard: 10Base-T, 100Base-TX

Protocol: support TCP, UDP, APR, ICMP and DHCP protocol

Signal: Rx+, Rx-, Tx+, Tx-

Speed: 10/100Mbps

Working format: full or half of duplex

Work mode: support Server and Client mode

Port memory: 512byte

Transmit distance: 100m

Interface protection: 1.5KV ESD

Interface type: RJ-45

Serial interface

EIA RS-232, RS-485, RS-422 standard

RS-232 signal: TxD, RXD, RTS, CTS, DTR, DSR, DCD, GND

RS-422 signal: Tx+, Tx-, Rx+, Rx-, GND

RS-485 signal: Data+, Data-, GND

Parity: None, Even, Odd, Space, Mark

Data bit: 7bit, 8bit

Stop bit: 1, 1.5, 2

Baud rate 150bps~230400bps

Flow control: RTS/CTS or non-flow control

RS485 data direction: ADDC (Auto data direction Control)

Loading: RS-485/422 side support 32 nodes (optional 128 nodes)

Transfer distance: RS-485/422 side: 1200m, RS-232 side: less than 15m

Serial line protect: 1500W surge protect, 15KV magnetic isolation

Interface type: RJ-45

Power supply

Power supply input: 5VDC

Consumption:300mA

Environment

Operating temperature: -20°C~60°C, 5~95% RH

Storage temperature: -25°C~85°C, 5~95% RH

Appearance

Color: Black

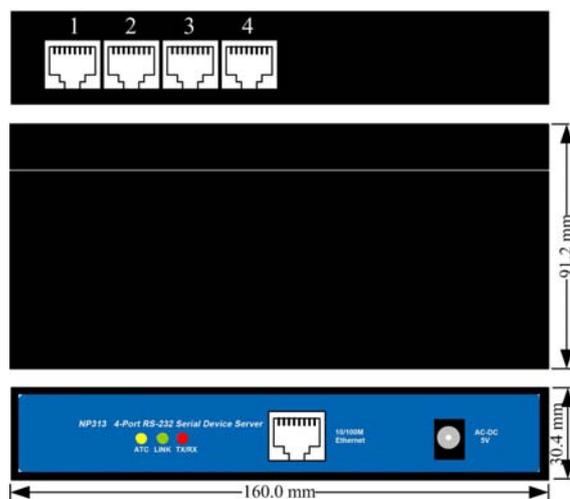
L×W×H: 160mm×91.2mm×30.4mm

Material: Iron (shell)

Weight: 230g

【Panel】

1. NP304



NP304 is 1 port 10/100Base-T(X) to 4 ports RS-232, NP304-4M is 1 port 10/100Base-T(X) to 4 ports RS-485/422, the appearance is the same.

DC-IN: 5VDC power supply input

10/100M Ethernet: 10/100Base-T(X) Ethernet input and output

ACT LED indicator: Bright all along when connect power supply

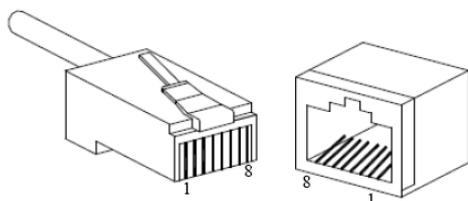
LINK LED indicator: Bright all along when connected

RX/TX LED indicator: Bright all along when connect to the network, Flash when data transfer

1, 2, 3, 4: RS-232 port (NP304), RS-485/422 port (NP304-4M)

10/100Base-T Ethernet port

The 10/100BaseT(X) ports located on facility front panel. The PIN define of RJ45 port display as follows, Connect by UTP or STP. The connect distance is no more than 100m. 100Mbps is used 100Ωof UTP 5, 10Mbps is used 100Ωof UTP 3, 4, 5.

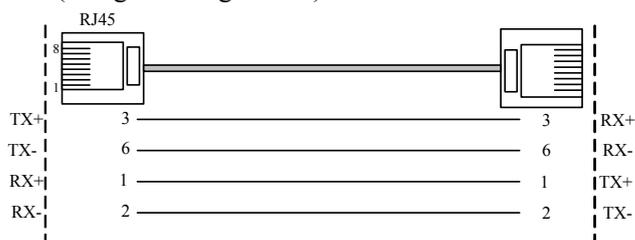


RJ 45 port support automatic MDI/MDI-X operation. Can connect the PC, Server, Converter and HUB by straight-through cable. Pin 1,2,3,6 Communication connect in MDI. 1→3, 2→6, 3→1, 6→2 are used as cross-over cable in the MDI-X port of Converter and HUB. 10Base-T/100Base-TX are used in MDI/MDI-X, the PIN define in the table as below.

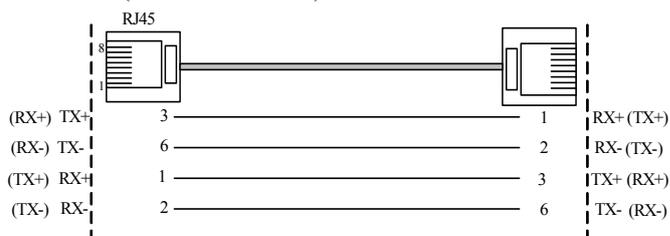
| pin | MDI signal | MDI-X signal |
|------------|------------|--------------|
| 1 | TX+ | RX+ |
| 2 | TX- | RX- |
| 3 | RX+ | TX+ |
| 6 | RX- | TX- |
| 4, 5, 7, 8 | — | — |

Note: "TX±" transmit data±, "RX±" receive data±, "—"not use.

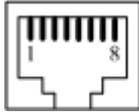
MDI (straight-through cable):



MDI-X (cross-over cable):



RS-232/485/422 interface



| PIN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------|-----|-----|-----|-----|------|-----|-----|-----|
| RS-232 | TXD | RXD | RTS | CTS | DSR | GND | DTR | DCD |
| RS-485 | D+ | D- | | | | | | |
| RS-422 | TX+ | TX- | RX+ | RX- | FULL | GND | | |

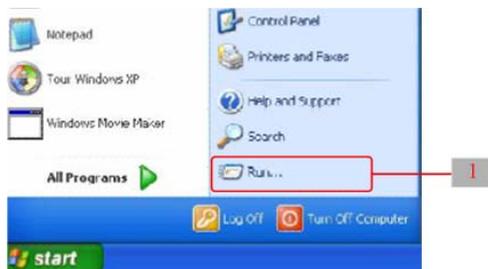
【Software installation and setting】

1 Set the IP address of the device

The IP address of the device and the PC must be in the same subnet network (the default IP address of the device is 192.168.1.233). First, you must make the IP address of the device in the same subnet network of the PC.

If they are not in the same subnet network or the IP address has been used by another device, use Telnet to change the IP address of the device.

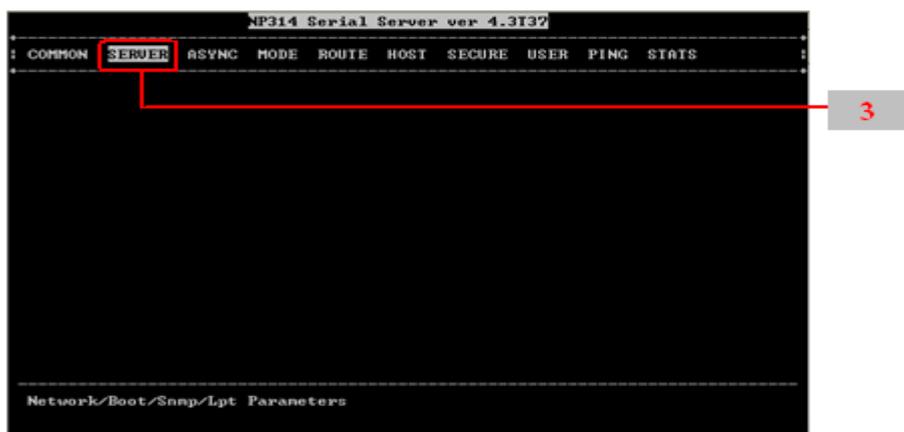
1 “Start”-----“all programs”-----“Running”



Input the default IP address of the device “Telnet: 192.168.1.233”



2. Click “OK”, setting the IP of the device by telnet. Choose the menu by ↑↓←→ of the



keyboard and quit by “ESC” key.

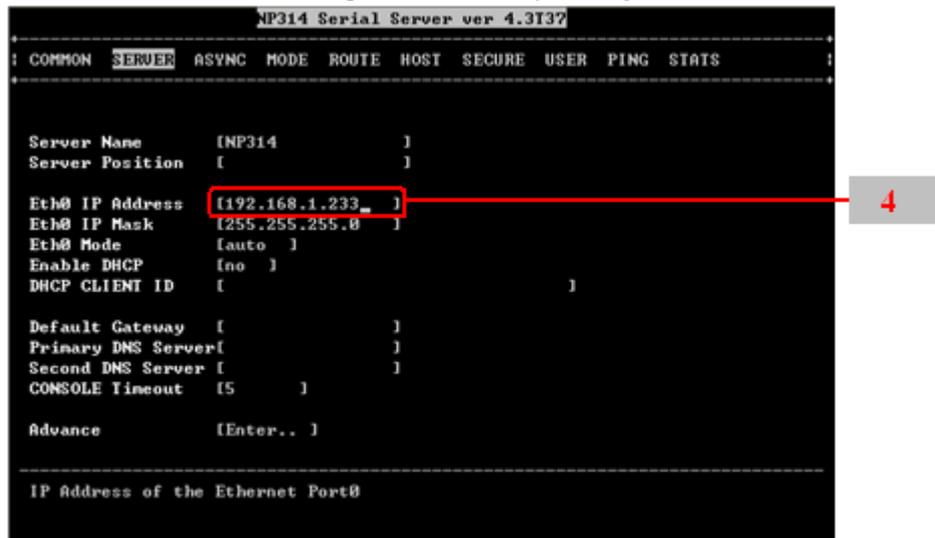
3 Choose the “Server” menu and push “Enter” key, Change the IP of the device.

```
NP314 Serial Server ver 4.3137
-----
: COMMON  SERVER  ASYNC  MODE  ROUTE  HOST  SECURE  USER  PING  STATS
:-----
Server Name      [NP314      ]
Server Position  [                ]
Eth0 IP Address  [192.168.1.233_]
Eth0 IP Mask     [255.255.255.0 ]
Eth0 Mode        [auto   ]
Enable DHCP      [no    ]
DHCP CLIENT ID   [                ]

Default Gateway  [                ]
Primary DNS Server[                ]
Second DNS Server[                ]
CONSOLE Timeout [5         ]

Advance          [Enter.. ]

-----
IP Address of the Ethernet Port0
```

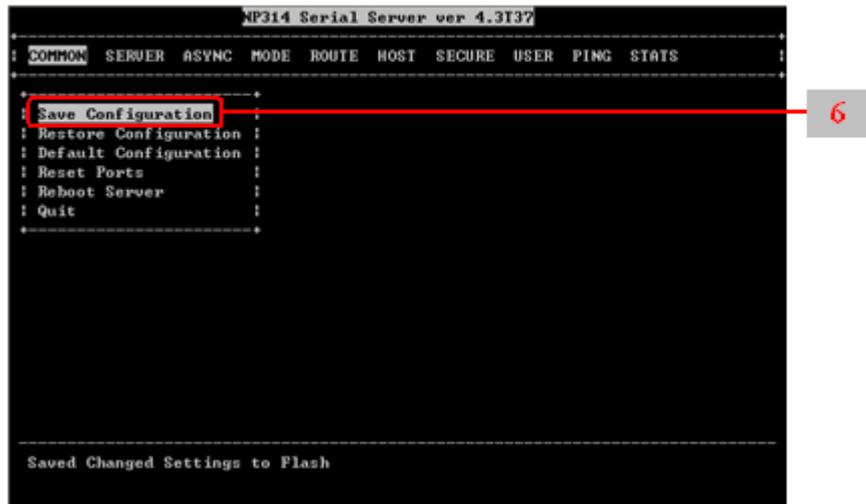


4 Change the IP (the changed IP must be in the same subnet of the PC). Push “Esc” key, quit the network setting.

```
NP314 Serial Server ver 4.3137
-----
: COMMON  SERVER  ASYNC  MODE  ROUTE  HOST  SECURE  USER  PING  STATS
:-----
Common Configuration
```



5 Push “Enter” key



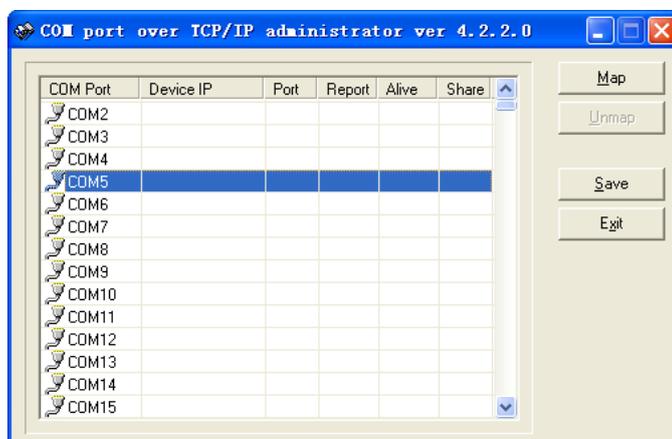
6 Push “Enter” Key, save the setting.

2. Create the Virtual COM port on the PC

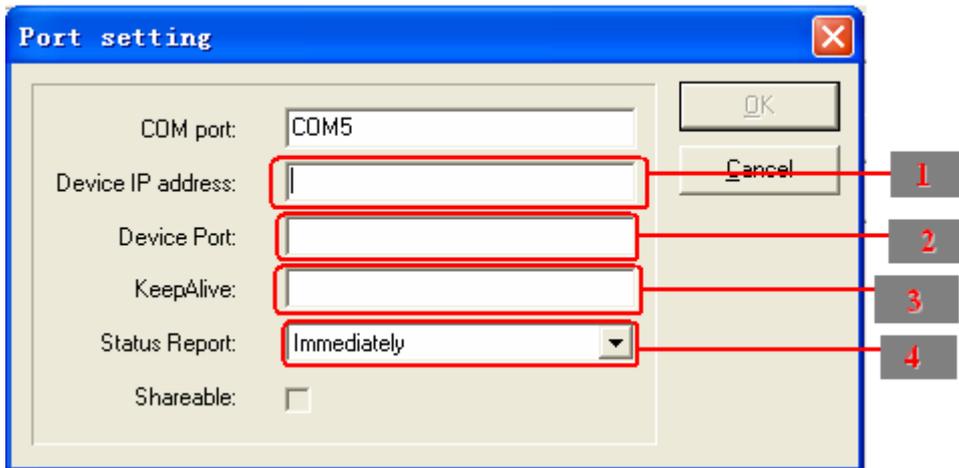
Setup the “setup_nt_2K.exe” software, then you will find the “COM port over tcp/ip.exe” application in the control panel of windows OS.



Running the “COM port over tcp/ip.exe” application and create virtual COM port communicate with the device on the PC.

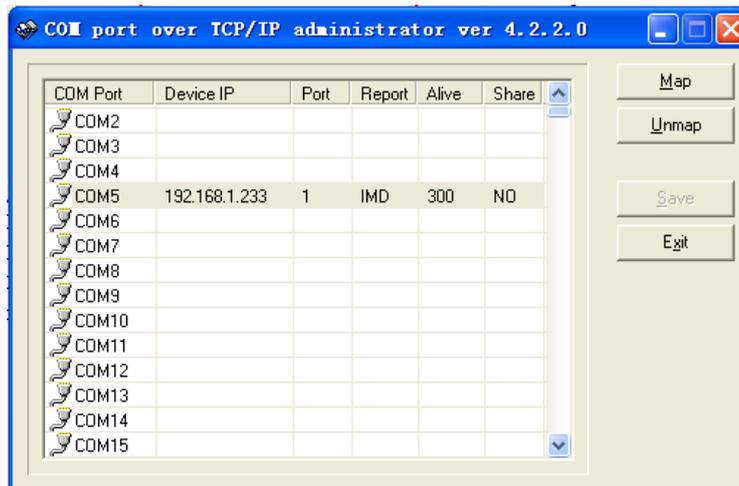


Choose the name of the virtual COM port and click “Map” button, setting the parameter of the virtual COM port as follows:

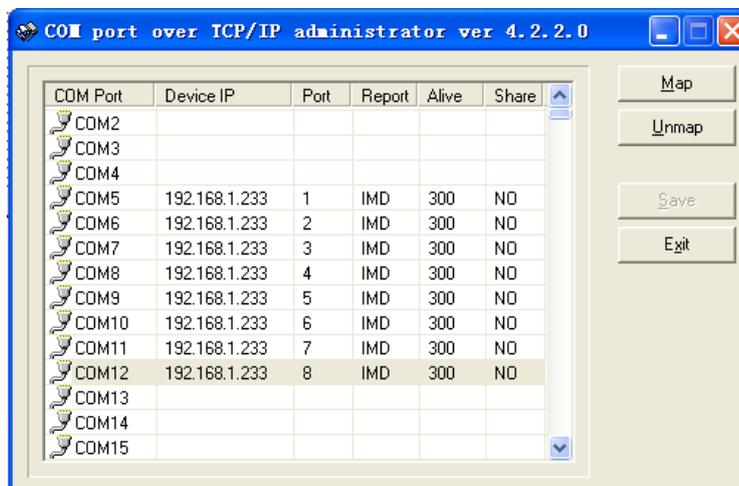


- 1 Input the IP of the device
- 2 Input the NO. of the port of the device(Input 1~8)
- 3 Input 300
- 4 Default the parameter

Click the “OK”, Click “Save”. COM5 has been created.



Now, the COM5 can communicate with the terminal on the NO.1 port of the device.



Other Virtual COM port setting the same as COM5

Note: Pay attention to the questions as below:

- (1) Please make sure that the power adapter is 5VDC
- (2) When connect to PC, use cross-over cable.
- (3) When connect to HUB or Switch, use straight-through cable

【Installation】

Note: Pay attention to the questions as below:

- (1) Please make sure that the power adapter is 5VDC
- (2) When connect to PC, use cross-over cable.
- (3) When connect to HUB or Switch, use straight-through cable

【Application】

Application sketch map:

