Reverse Telnet Mode for NPort

Moxa Technical Support Team

support@moxa.com

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About Moxa

Moxa is a leading provider of edge connectivity, industrial computing, and network infrastructure solutions for enabling connectivity for the Industrial Internet of Things. With 35 years of industry experience, Moxa has connected more than 82 million devices worldwide and has a distribution and service network that reaches customers in more than 80 countries. Moxa delivers lasting business value by empowering industry with reliable networks and sincere service for industrial communications infrastructures. Information about Moxa's solutions is available at www.moxa.com.

How to Contact Moxa

Tel: 1-714-528-6777 Fax: 1-714-528-6778



Moxa Tech Note

This Tech Note applies to NPort 5000, NPort 6000, and NPort Wireless Plus device servers. The following models are included:

- NPort 5100 Series
- NPort 5200 Series
- NPort 5400 Series
- NPort IA5150 and IA5250
- NPort W2150 Plus and W2250 Plus
- NPort 6000 Series
- NPort 2150A and NPort 2250A Series
- NPort W2150A-W4/W2250A-W4 Series

1 What is Reverse Telnet Mode?

In Reverse Telnet Mode, the Telnet session is initiated from the network. The serial device waits for the network host to start the connection. Typically, Reverse Telnet Mode is used for console server applications, where a network host Telnets to a device's console port for configuration or maintenance. TCP Server Mode is similar because it involves a serial device acting as a server. However, TCP Server Mode does not convert CR/LF characters.



2 Configuring the NPort for Reverse Telnet Mode

Before performing the following steps, restore the NPort's default settings by holding down the reset button for 10 seconds.

- 1. Turn the NPort on. The Ready LED should turn green.
- 2. Make sure that the NPort and the host PC are properly connected to the network.
- 3. Adjust the NPort's IP settings as necessary so that it is in the same network as your PC. You may also need to modify the host PC's IP configuration. Make sure you can ping the NPort from your host PC.

Remember, the IP addresses of the NPort and the PC must be on the same subnet. If one IP address is modified, you may need to modify the other IP address.

- On the host PC, connect to the NPort's Telnet console by entering telnet <NPort's IP address> at the command prompt. For example, if your NPort's IP address is 192.168.127.254, enter telnet 192.168.127.254 at the command prompt.
- In the Telnet console under Port > Modes, set Application to Reverse Terminal and Mode to RTELNET. Under Description/more settings, set Map keys <CR-LF> to as necessary for the device's console.
- In the Telnet console under **Port > Line**, adjust the communication parameters as necessary for your terminal, such as 115200, N, 8, 1.
- In the Telnet console, select Save/Restart to restart the NPort with the new settings activated.

3 Testing Reverse Telnet Mode for the Nport



- 1. Set the NPort's serial port to Reverse Telnet Mode as described above and to RS-232.
- 2. Use an RS-232 null modem cable to connect the device's console port to the NPort's serial port.
- At the command prompt, enter telnet <NPort's IP address> 4001 (e.g., telnet 192.168.254.127 4001). The command prompt can be opened in Windows through Start > Run... and entering cmd.
- You should enter the device's console and be able to see messages normally. if messages are not displayed normally, you may need to adjust the <CR-LF> mappings on the NPort.

Moxa Tech Note

4 Cable Wiring



4 wire RS-422/485 Cable Wiring				
NPort	I.	Device		
Tx (+) Tx (-) Rx (+) Rx (-) GND		Rx (+) Rx (-) Tx (+) Tx (-) GND		

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