# **Reverse Telnet Mode for NPort**

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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

### 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 initiate 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 in that it involves a serial device acting as a server. However, TCP Server Mode does not convert CR/LF characters.



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### About Moxa

Moxa manufactures one of the world's leading brands of device networking solutions. Products include serial boards, USB-to-serial hubs, media converters, device servers, embedded computers, Ethernet I/O servers, terminal servers, Modbus gateways, industrial switches, and Ethernet-to-fiber converters. Our products are key components of many networking applications, including industrial automation, manufacturing, POS, and medical treatment facilities.

#### How to Contact Moxa

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# Configuring the NPort for Reverse Telnet Mode

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

Also, please note that for NPort Wireless Plus models, only one network interface (WLAN or Ethernet) can be active at a time. To use the Ethernet interface, make sure the network cable is plugged in before powering on the NPort. To use the WLAN interface, make sure the network cable is unplugged when the NPort is powered on.

- 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.
- 6. In the Telnet console under **Port** > **Line**, adjust the communication parameters as necessary for your terminal, such as 115200, N, 8, 1.
- 7. In the Telnet console, select **Save/Restart** to restart the NPort with the new settings activated.

## 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.
- 3. 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**  $\rightarrow$  **Run**... and entering **cmd**.

4. 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.

### Cable Wiring



4 wire RS-422/485 Cable Wiring			
NPort		Device	
Tx (+) Tx (-) Rx (+) Rx (-) GND		<ul> <li>Rx (+)</li> <li>Rx (-)</li> <li>Tx (+)</li> <li>Tx (-)</li> <li>GND</li> </ul>	