

DNC via Ethernet Wired or Wireless Serial Device Server.

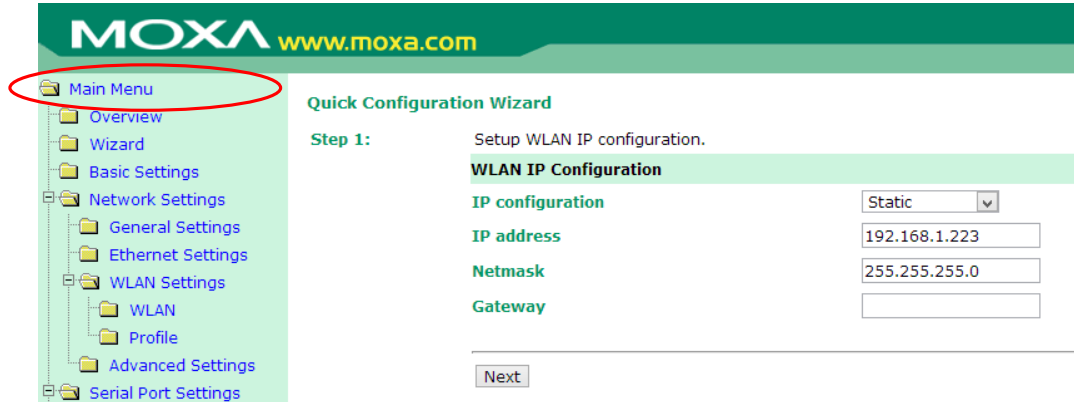
As well as a wide range of standard, PCI USB and other locally attached serial ports, the DNC software can use remote serial ports accessible via TCP/IP.

Wired and Wireless serial device servers are available from dozens of different manufacturers but we're showing the setup of a common Serial Device Server manufactured by Moxa.

Devices from other manufacturers will have different layout but will have a similar set of options.

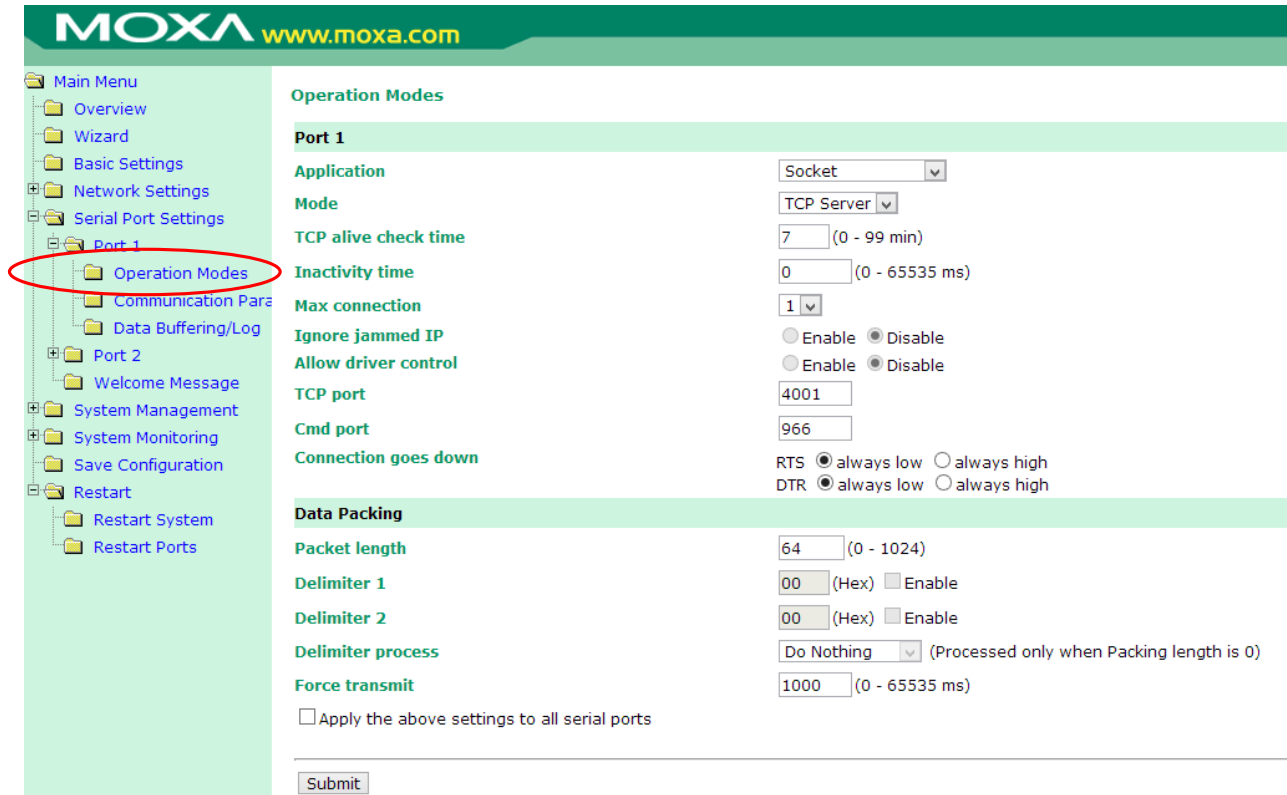
This type of device usually has a built in 'Wizard' to configure the network settings such as IP address etc.

In the case of a Wireless device you will also require the SSID and password of the wireless AP or router.



The screenshot shows the Moxa Quick Configuration Wizard interface. The left sidebar contains a tree view of settings categories, with 'Main Menu' circled in red. The main content area is titled 'Quick Configuration Wizard' and shows 'Step 1: Setup WLAN IP configuration.' Below this, the 'WLAN IP Configuration' section includes fields for 'IP configuration' (set to 'Static'), 'IP address' (192.168.1.223), 'Netmask' (255.255.255.0), and 'Gateway'. A 'Next' button is visible at the bottom.

The Wizard of our Moxa device included settings for Operation Mode and TCP Port – but, in our case, we still had to confirm/adjust the Application, Mode and TCP Port via the serial port settings shown below.



The screenshot shows the Moxa Serial Port Settings page. The left sidebar has 'Operation Modes' circled in red. The main content area is titled 'Operation Modes' and shows settings for 'Port 1'. The 'Application' is set to 'Socket', 'Mode' is 'TCP Server', and 'TCP port' is 4001. The 'Data Packing' section includes 'Packet length' (64), 'Delimiter 1' (00), 'Delimiter 2' (00), and 'Force transmit' (1000). A 'Submit' button is at the bottom.

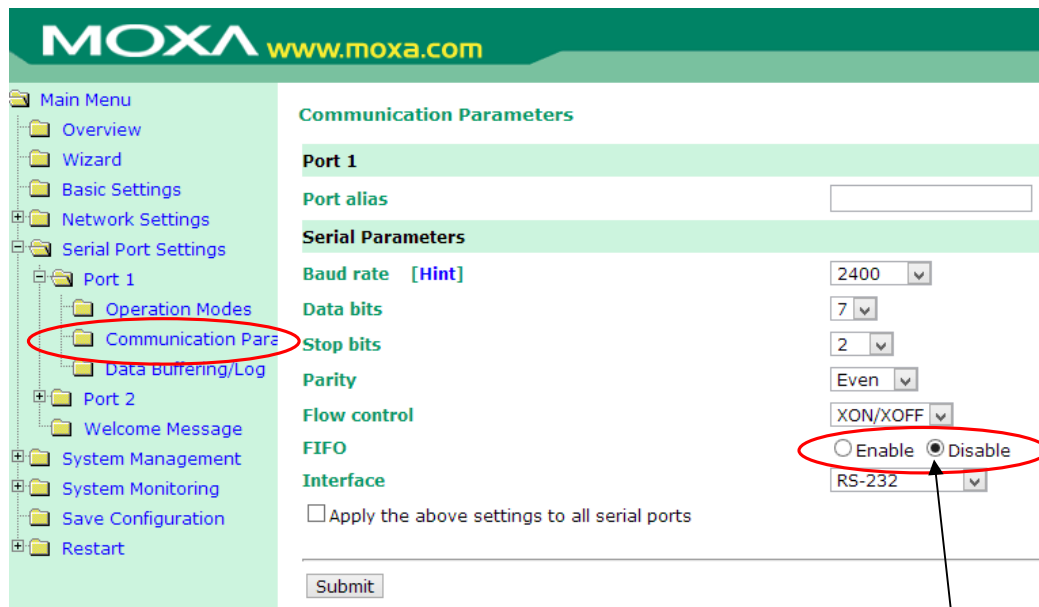
Cmd port is not relevant. We don't use it in Socket mode.

Data Packing only affects how data FROM the cnc is sent to the DNC computer.

Packet Length. A small packet size makes the display of the DNC software look and behave more like a local RS232 port but increases network traffic. 64 is a good compromise.

Force transmit Set it to 1000 (1 second). If set too high this can cause the Remo RX Timeout to trigger too soon. Setting too low increases network traffic. 500 to max 1000 is OK.

When using a serial device server the RS232 baud rate, databits, parity etc of the DNC software are ignored. They must be set at the serial device server as shown below.

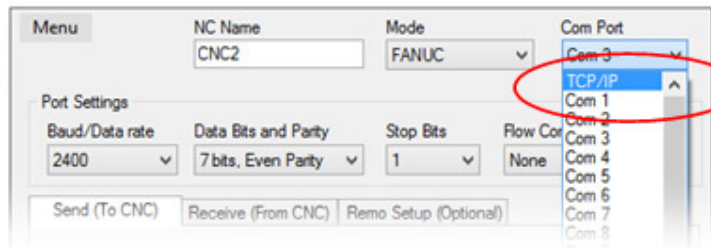


Set the baud rate etc the same as your CNC.

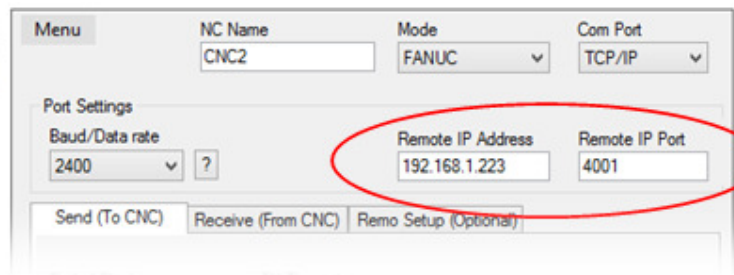
In all cases we recommend that FIFO is Disabled

Setting up the DNC Software to use the Serial Device Server.

Open Setup in the DNC software and change the Com Port to TCP/IP at the very top of the port list.



Enter the Serial Device IP address and Port number.



Set the baud rate the same as the CNC/Serial Device Server.

Note: When transmitting over IP the DNC speed is no longer relevant. However, setting the DNC speed to the same speed as the Serial Device Server will improve the visual display of the DNC software. It can also reduce volume network traffic and prevent buffer-full events in the serial device server.