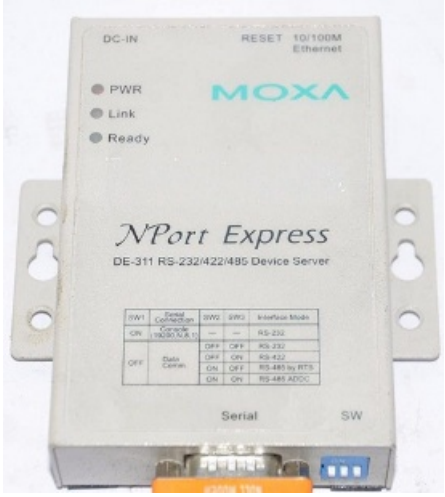
# MOXA NPort DE-311 Series Serial to Ethernet Converter Installation Guide



Contents

1 MOXA NPort DE-311 Series Serial to Ethernet Converter
2 Overview
3 Hardware Introduction
4 Hardware Installation
5 Software Installation Information
6 Environmental Specifications
7 Documents / Resources
7.1 References
8 Related Posts

## MOXA NPort DE-311 Series Serial to Ethernet Converter



## Overview

Welcome to Moxa's NPort Express DE-311, a compact palm-sized data communication device that allows you to control RS-232/422/485 serial devices over a TCP/IP based Ethernet network.

### Package Checklist

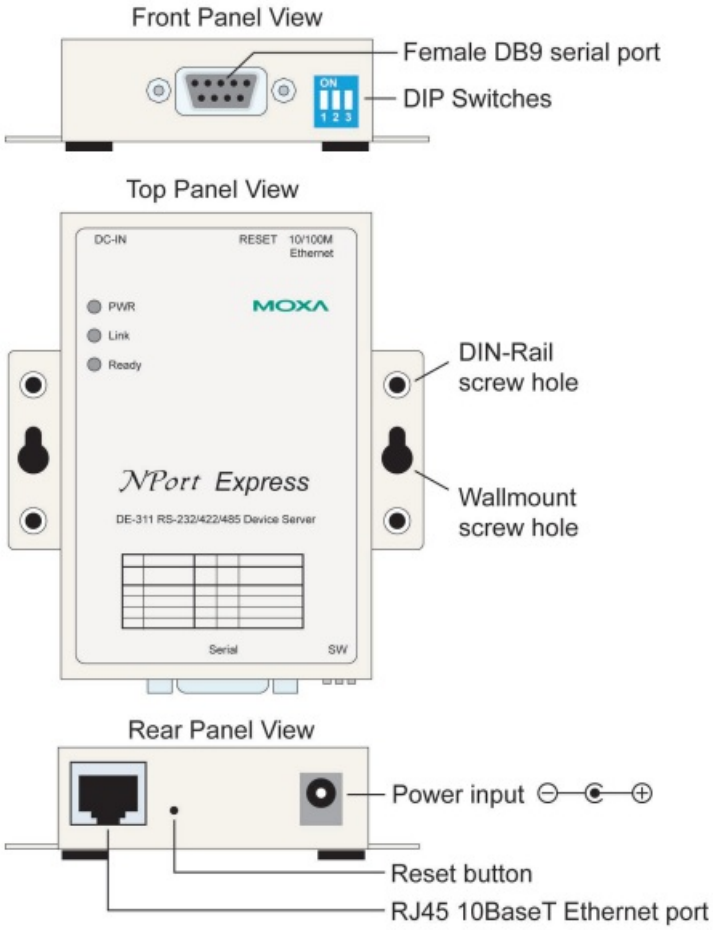
Before installing the DE-311, verify that the package contains the following items:

- NPort DE-311 universal serial device server
- Mini adapter
- Quick installation guide (printed)
- Warranty card

### Optional Accessories

- DK-35A (for 35 mm DIN-rail, includes 4 screws) Please notify your sales representative if any of the above items is
  missing or damaged.

## Hardware Introduction




### Reset Button

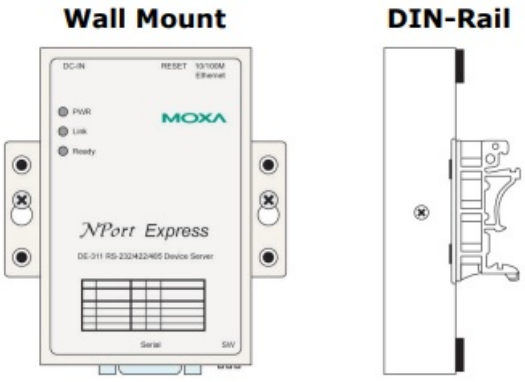
Hold the reset button down to erase the password or load the factory defaults, depending on how long the button is held down:

- **3 seconds to erase the password**
  The ready LED will flash every half-second when the password has been erased. You may release the reset button at this time.
- 10 seconds to load factory defaults
  The ready LED will flash five times every second when the factory defaults have been loaded. You may release the reset button at this time.
  **LED Indicators—There are three LED indicators on the top panel:**

| LED Name | LED Color | LED Function |
|---|---|---|
| PWR | Red | Power is on |
| | Off | Power is off, or power error condition exists |
| Link | Orange | 10 Mbps Ethernet connection |
| | Green | 100 Mbps Ethernet connection |
| | Off | Ethernet cable is disconnected, or has a short |
| Ready | Green | System is ready |
| | Off | System error |

## Hardware Installation

Placement Options You may place the unit on a desktop or other horizontal surface. You may also make use of the DIN-rail or wall mount options, as illustrated here.




**DIP Switch**
The top panel contains the following table, which explains the DIP switch settings for the serial port. The DIP switches are located at the rear panel.

| SW1 | Serial Connection | SW2 | SW3 | Interface Mode |
|---|---|---|---|---|
| ON | RS-232 Console | – | – | – |
| OFF | Data Comm | OFF | OFF | RS-232 |
| | | OFF | ON | RS-422 |
| | | ON | OFF | 2-wire RS-485 by RTS |
| | | ON | ON | 2-wire RS-485 by ADDC |

SW1 is used to activate the serial console. When SW1 has been changed, the unit will reboot to initialize the new setting. You will need to wait for the green Ready LED to turn off and then on again, which indicates that serial console mode has been activated or deactivated. SW2 and SW3 are used to select the serial port interface. (Note that RTS stands for Ready
To Send and ADDC stands for Automatic Data Direction Control.)

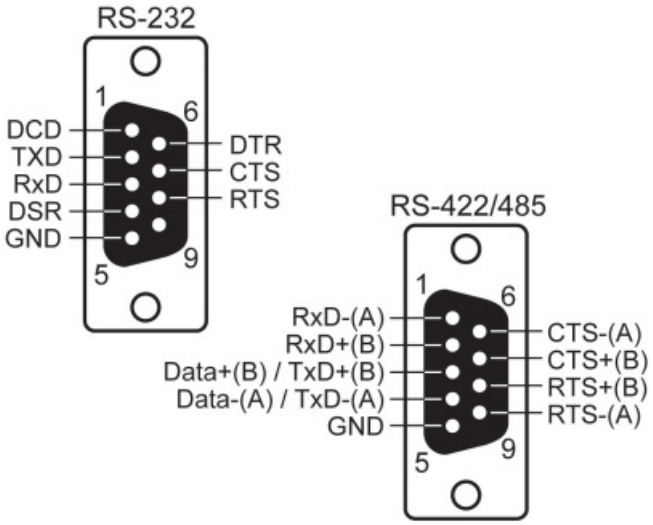
When adjusting the DIP switches, please keep the following in mind:

- To use the serial port as an RS-232 console connection, such as when using MOXA PComm Terminal Emulator or HyperTerminal, set SW1 to the ON.
- Some configuration may be carried out through a Telnet connection, during which data is transmitted through the unit's Ethernet port. SW1 must be OFF in order for the unit to establish a Telnet connection.

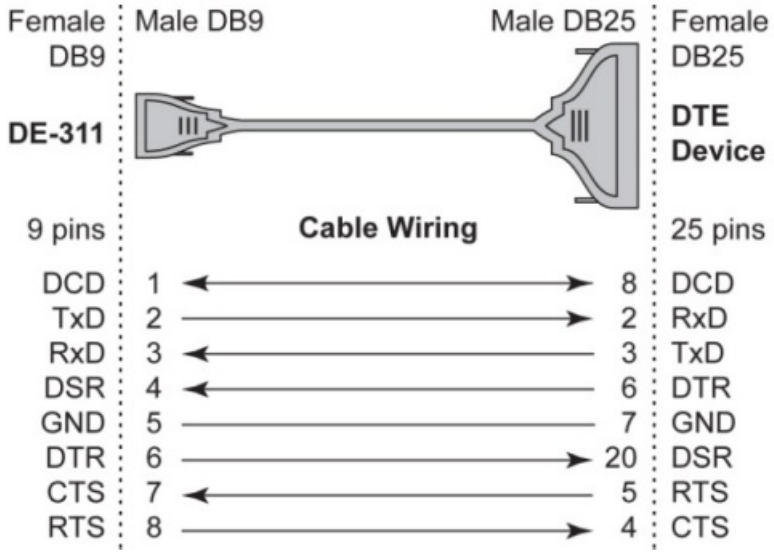
## Software Installation Information

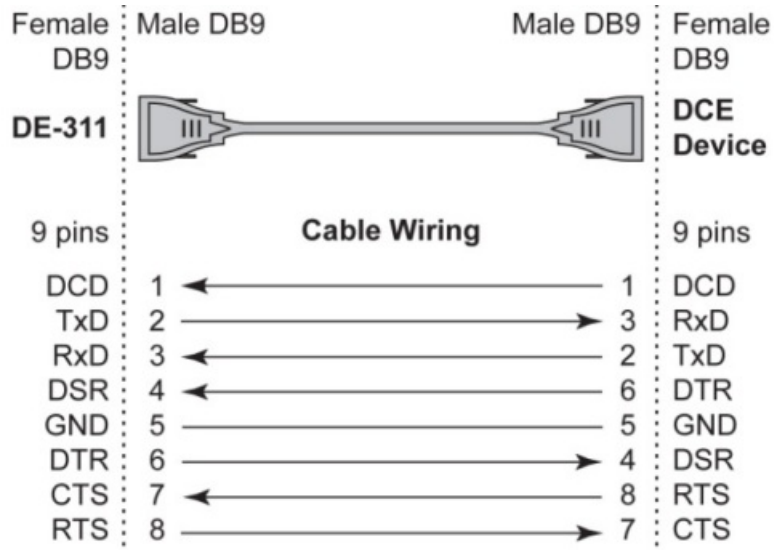
You may use the default IP address 192.168.127.254 to log into the DE-311 to configure proper settings for your environment. More details you may find in the User Manual from Moxa's website.

**Pin Assignments and Cable Wiring**
Female DB9 Connector Pin Assignments

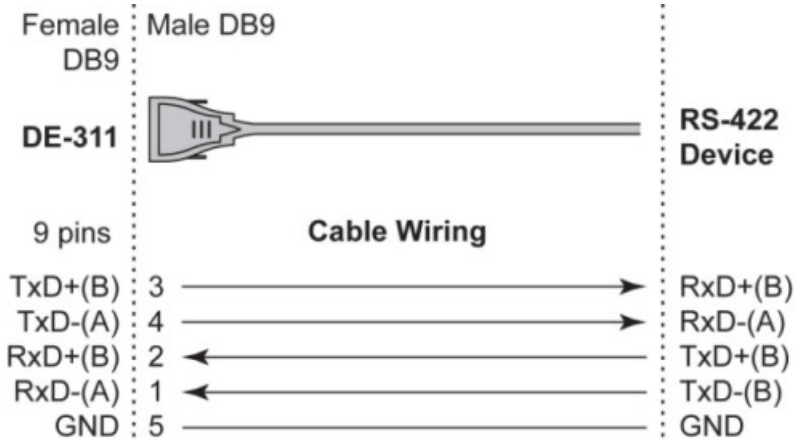



**RS-232 Wiring**

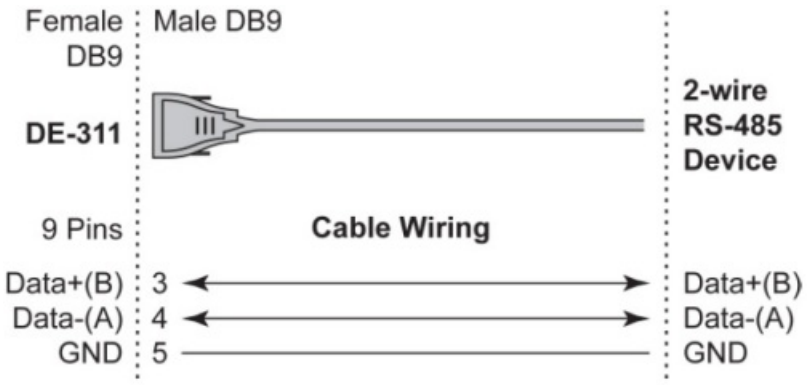



**RS-422 Wiring**



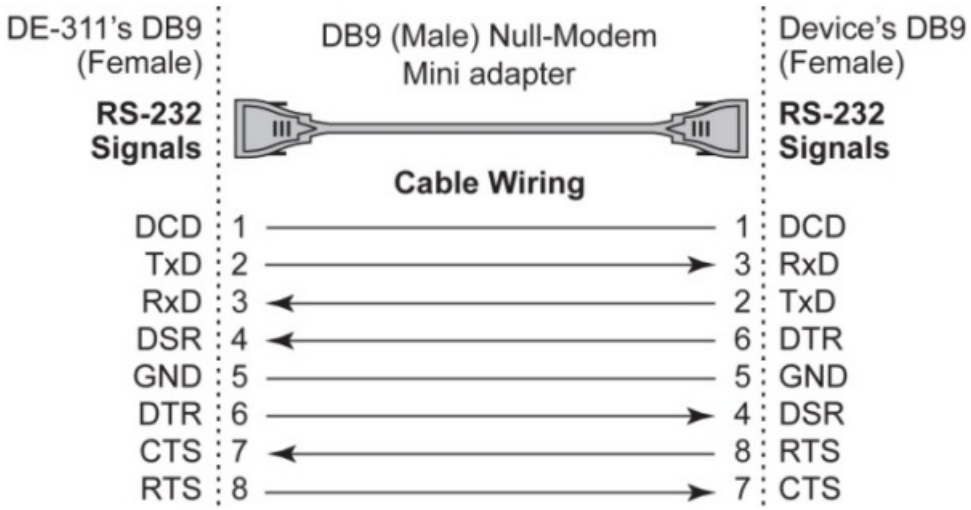

**RS-485 Wiring**




**Mini Adapter**

The NPort Express DE-311 accepts devices with both male and female connectors. A D-shell female serial connector is built-in, and a DB9 male null-modem adapter is included as a standard accessory.

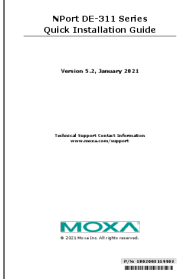
**If you wish to make your own DB9 to DB9 null-modem (or cross-over) cable, the pinouts are as follows:**




## Environmental Specifications

| | |
|---|---|
| **Power requirements** | DC 9 V to 30 V, 300 mA at 9 V |
| **Operating temp.** | 0 to 55°C |
| **Operating humidity** | 5 to 95% RH |
| **Dimensions (W×D×H)** | 90 × 100.4 × 22 mm (including ears)<br>3.54 × 3.95 × 0.87 inch<br>67 × 100.4 × 22 mm (without ears)<br>2.64 × 3.95 × 0.87 inch |
| **Magnetic isolation** | 1.5 KV for Ethernet port |
| **Regulatory approvals** | FCC B, CE B, UL, CUL, TUV |

## Documents / Resources

| | |
|---|---|
|  | MOXA NPort DE-311 Series Serial to Ethernet Converter [pdf] Installation Guide<br>NPort DE-311 Series Serial to Ethernet Converter, NPort DE-311 Series, Serial to Ethernet Converter |

## References

- ™ Moxa - Support

Manuals+,