



# NPort DE-311 Quick Installation Guide

Fifth Edition, June 2014

## 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:

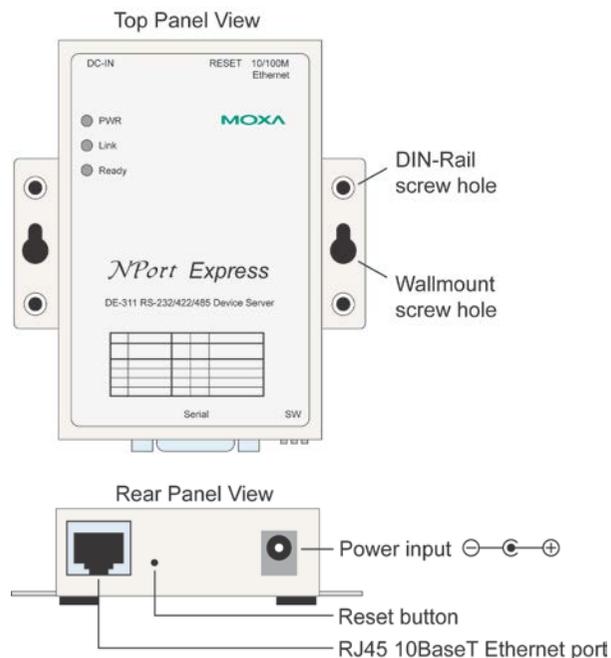
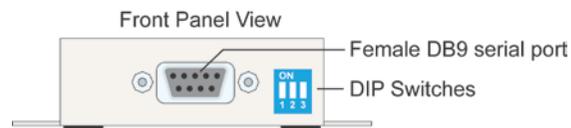
- NPort DE-311 universal serial device server
- NPort Express Quick Installation Guide for the DE-311
- NPort Documentation & Software CD
- Mini adapter

### 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.

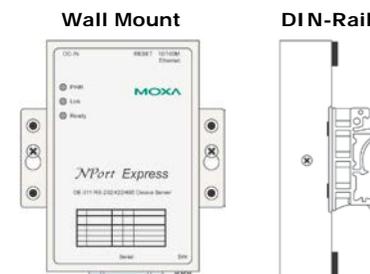
**LED Indicators**—There are three LED indicators on the top panel:

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:

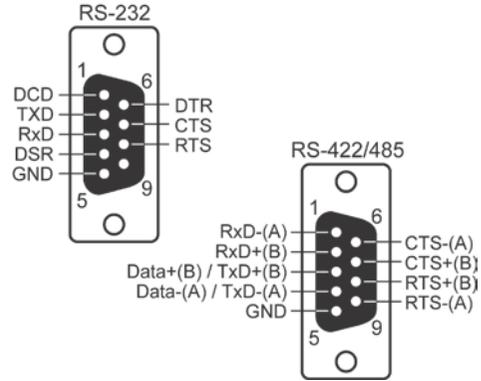
- To use the serial port as an RS-232 console connection, such as when using MOXA PComm Terminal Emulator or HyperTerminal, set SW1 to the ON.
- Some configuration may be carried out through a Telnet connection, during which data is transmitted through the unit's Ethernet port. SW1 must be OFF in order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

## Software Installation Information

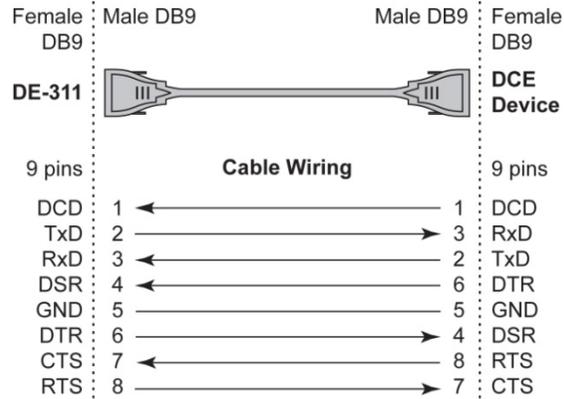
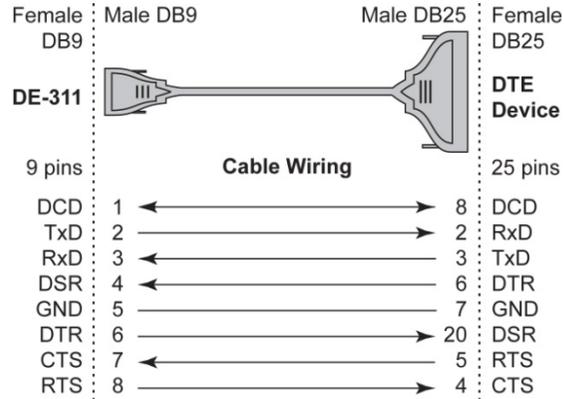
Detailed instructions for installing the included software can be found on the NPort Documentation & Software CD in the "NPort Family Software Installation Guide."

# Pin Assignments and Cable Wiring

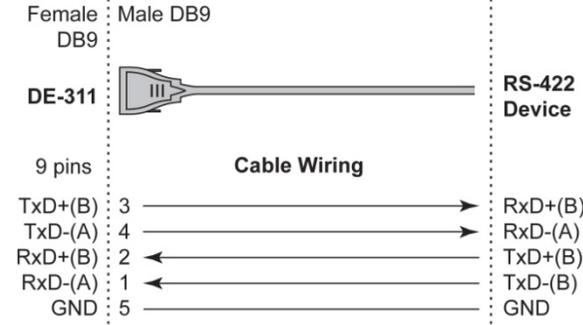
## Female DB9 Connector Pin Assignments



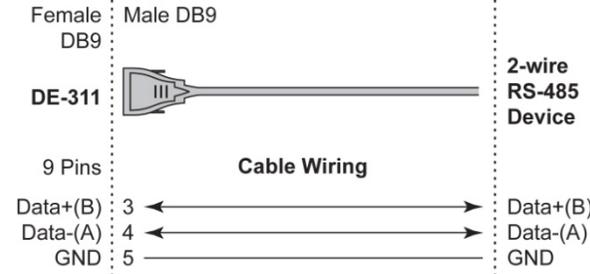
### RS-232 Wiring



### RS-422 Wiring



### RS-485 Wiring

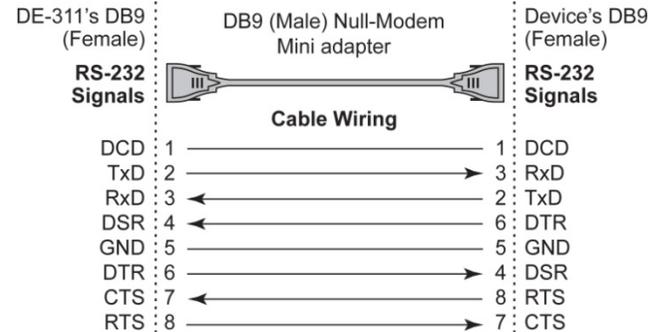


### Mini Adapter

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 9V to 30V, 300 mA at 9V
Operating temp.	0 to 55°C
Operating humidity	5 to 95% RH
Dimensions (W×D×H)	90 × 100.4 × 22 mm (including ears) 3.54 × 3.95 × 0.87 inch 67 × 100.4 × 22 mm (without ears) 2.64 × 3.95 × 0.87 inch
Surge protection	15 KV ESD for serial port
Magnetic isolation	1.5 KV for Ethernet
Regulatory approvals	FCC B, CE B, UL, CUL, TUV