NPort 4511 Quick Installation Guide

First Edition, September 2004

1. Overview

NPort 4511 is a professional Programmable Communication Gateway that makes your RS-232/422/485 devices network-ready. Its programmable nature makes it a value-added developing platform that is suitable for protocol conversion applications. NPort 4511 is a flexible, reliable, cost-effective, and customizable solution that gives System Integrators greater design flexibility.

2. Package Checklist for NPort 4511-ST

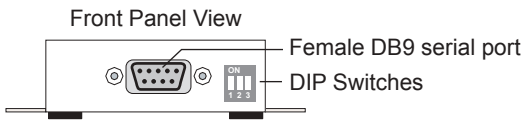
NPort 4511-ST is a convenient Starter Kit that can be used to evaluate NPort 4511. The NPort 4511-ST package contains the following items:

- **1 NPort 4511 unit**
- **Documentation and Software CD**
  Contains Auto-Run Installation Shield, Software Development Kit (SDK) and library, User's Manuals, and Turbo-C Installation Package.
- **Accessories**
  Switching Power Adaptor, Ethernet Cross-Over Cable, CBL-F9M9-150, Mini Adaptor, RS-232 Loopback Tester, Wiring Terminal, and DIN-Rail Mounting Kit
- **Miscellaneous**
  Turbo-C License Card, Moxa 5-year Warranty Booklet

NOTE: Notify your sales representative if any of the above items is missing or damaged.

3. Hardware Introduction

As shown in the following figures, NPort 4511 has one 3-in-1 serial port, that supports RS-232/422/485 serial interfaces.



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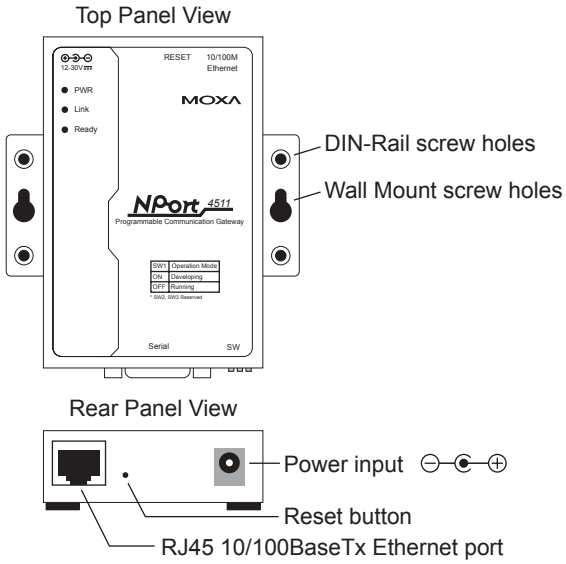
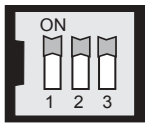


Reset Button—Press the Reset button continuously for 5 sec to load factory defaults: Use a pointed object, such as a straightened paper clip or toothpick, to press the reset button. This will cause the Ready LED to blink on and off. The factory defaults will be loaded once the Ready LED stops blinking (after about 5 seconds). At this point, you should release the reset button.

LED Indicators—The top panels of NPort 4511 have three LED indicators, as described in the following table.

LED Name	LED Color	LED Function
PWR	red	Power in 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	NPort 4511 system is ready.
	off	NPort 4511 has malfunctioned (if PWR LED is on)

DIP Switch Settings—The top panel of NPort 4511 contains the selection table for DIP switch 1 (SW1), which is used to select NPort 4511's operation mode. The DIP switch SW1 is located on NPort 4511's front panel.



SW1	Operation Mode
ON	Developing
OFF	Running

Keep the following points in mind when setting the DIP switches.

- DIP Switch SW1 selects NPort 4511's Operation Mode.
- DIP Switches SW2 and SW3 are not functional.

4. Software Installation Information

To begin with, you will need to install the SDK utility, library, and Turbo C compiler on the host computer.

1. Insert the Documentation and Software CD into the computer's CD-ROM drive.
2. Once the Moxa NPort 4511 SDK and Document CD window is launched, click the Install SDK button and then follow the instruction on the screen.
3. To install Turbo C, return to the Moxa NPort 4511 Documentation and Software CD window and then click the INSTALL Turbo C button.

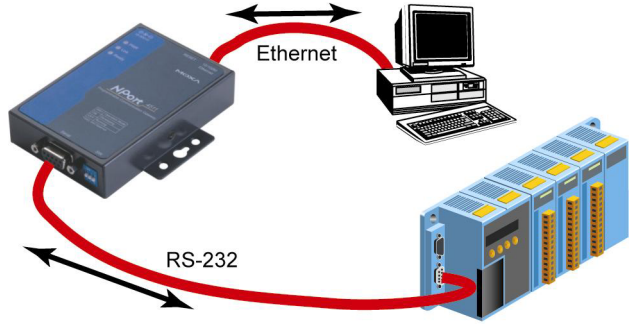
5. Hardware Installation Information

Take the following steps to connect NPort 4511's power adapter.

1. Plug the power adapter's DC plug into NPort 4511's DC-IN jack.
2. Plug the power adapter into an electrical outlet.

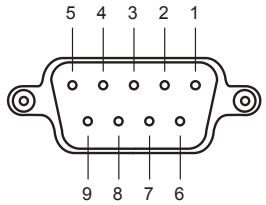
Set up a development environment as follows,

1. Connect NPort 4511 to a host via an Ethernet network.
2. Connect NPort 4511 to a target device via serial port.



6. Serial Port Pin Assignments

Female DB9



Pin	RS-232	RS-422	RS-485 (2-wire)
1	DCD	RxD-(A)	---
2	TxD	RxD+(B)	---
3	RxD	TxD+(B)	Data+(B)
4	DSR	TxD-(A)	Data-(A)
5	GND	GND	GND
6	DTR	CTS-(A)	---
7	CTS	CTS+(B)	---
8	RTS	RTS+(B)	---
9	---	RTS-(A)	

7. Environmental Specifications

Power Requirements	Power input: 9-30 VDC
Power consumption	300 mA @ 9 VDC (max.)
Operating Temperature	0 to 55°C (32 to 131°F), 5 to 95% RH
Storage Temperature	-20 to 80°C (-4 to 185°F), 5 to 95% RH
Magnetic isolation	Built-in 1.5 KV
Serge protection	15 KV ESD for all signals
Regulatory Approvals	FCC Class B, CE Class B, CUL, TÜV

8. Development Environment

Development Platform	Windows 95/98/NT/2000/XP
Compiler/Linker	Borland Turbo C 2.01 included with license card (SDK is compatible with Borland Turbo C 2.x, Borland C 3.x)
Development Console	Ethernet
Software Download Tool	SDK Manager
Debug Tool	SDK Manager
Library	Serial port, Simplified Socket, BSD Socket, System, Flash Access, Debugging, STD C libraries
User Program Space	Total of 64 KB for code and data Data
Storage	32 KB Read/Write on Flash ROM
Max. TCP Sessions	10 sessions
Max. Thread	Single task
Intellectual Property Protection	Software key protection for user program

Note: Refer to the User's Manuals on the Documentation and Software CD for more detailed information about this product.

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