



NPort Express Module

Make Your Serial Devices Internet Ready™

Overview ■

Why NPort Embedded Module?

"Everything is networked" is rapidly becoming the norm the world over. However, it takes tremendous manpower, precious time, and much experience, for equipment manufacturers to develop network technologies. Since most serial-comm based devices, such as card readers, come equipped with an RS-232 interface, NPort Embedded Module provides an immediate and easy solution for transferring RS-232 data across a TCP/IP network. By using NPort Embedded Module, your product can be value-added in no time, and the value of your existing equipment can be extended into the next generation.

What Is NPort Embedded Module?

NPort Embedded Module is a board-level product that equipment manufacturers can integrate directly into their products. It converts the RS-232 serial port on a traditional device into a 10/100 Mbps Ethernet port with TCP/IP protocol, allowing information to be shared on the Intranet/Internet. NPort Embedded Module not only supports TCP/IP, but also Telnet and RTelnet, making it possible to build up applications based on the popular TCP/IP protocol. Moreover, NPort Embedded Module comes with Moxa Windows COM drivers, making it possible to run existing software on a networked PC that was originally using a direct serial connection.

Features ■

- Auto-detecting 10/100Mbps Ethernet
- RS-232/TTL serial interfaces
- Credit card size for easy integration
- Built-in Ethernet and TCP/IP protocol supports Driver Mode, TCP Server, TCP Client, UDP Server/Client, Ethernet Modem, Pair connection
- Supports Windows Native COM drivers with automatic network connection recovery
- Supports Linux fixed/real tty drivers

Benefits ■

- Instantly turn serial devices into Internet devices, saving on product development costs
- Easy integration
- No need to change the serial device's internal firmware
- No need to change the existing application software (Windows 95/98/NT/2000), saving transformation costs
- Easy maintenance with remote management via the Internet or Intranet

Applications ■

- Personal identification machines
- Card readers
- Entrance control machines
- POS terminals
- Voltage Meters
- CNCs, Milling machines
- Electronic display systems

Parts	1	2	4	8	16	32
Interface						
RS-232	√					
RS-422						
RS-485						

Specifications

Hardware

Processor	16 bit processor
Memory	512 KB
Connector type	Pin header array

Interface

LAN	Auto-detecting 100Base-TX (10/100 Mbps)
Serial	RS-232
No. of serial ports	1
Signals	RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

* TTL interface is also available

Performance

Speed	50 bps – 230.4 Kbps
-------	---------------------

Configuration

Parity	None, even, odd, space. mark
Data bits	5, 6, 7, 8
Stop bits	1, 1.5, 2

OS Supported

DE-311M	Windows XP, Windows 2000, Windows NT, Windows 95/98/ME, Unix fixed tty driver for UnixWare SVR4.2, UnixWare 7 SVR5, SCO Open Server, SCO UNIX, Linux fixed tty for 2.0.x, 2.2.x, 2.4.x, Linux real tty for 2.0.36 above, 2.2.x, 2.4.x (Intel x86, running TCP/IP)
---------	---

Protocols

DE-311M	TCP, IP, UDP, Telnet, Rtelnet, DHCP, ICMP
---------	---

Operation Modes

Driver Mode, TCP Server, TCP Client, UDP Server/Client, Pair Connection,
Ethernet Modem

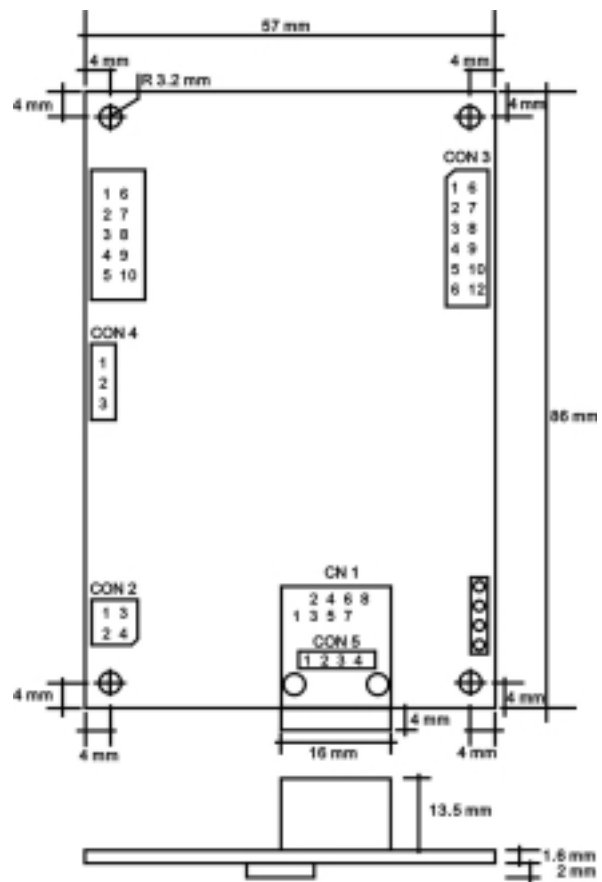
Power and Environment

Power Requirements	5V DC, 350 mA (max.)
Operating Temp.	0 – 55°C
Operating Humidity	5 – 95%RH

Storage Temp.	-20 – 85°C
Dimensions	57 x 90 x 18 mm (W x D x H)
Regulatory Approvals	FCC, CE, UL

Please contact our sales personnel for more information.

Mechanical Drawing



COM port RS-232 Signals

Pin	Con1
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	-
10	-

LED, Reset and Console/COM SW

	Con3	
LED_LAN 10M	1 7	GND
LED_LAN 100M	2 8	GND
LED Power	3 9	GND
LED SW Ready	4 10	GND
Reset	5 11	GND
Console/COM	6 12	GND



Moxa Technologies Co., Ltd. (Headquarters)
 Fl.4, No.135, Lane 235, Pao-Chiao Rd., Shing Tien City, Taipei, Taiwan, R.O.C.
 Tel:+886-2-8919-1230 Fax:+886-2-8919-1231
 info@moxa.com.tw

USA
 Moxa Networking, Inc.
 Tel:+1-732-738-4303 Fax:+1-732-738-4884
 info@moxa.com

Germany
 Moxa Technologies GmbH
 Tel:+49 2405-462795 Fax:+49 2405-462799
 info@moxatech.de

China
 Moxa Tech Beijing, Inc.
 Tel:+86-10-6872-3960/61 Fax:+86-10-6872-3958
 moxa@moxa.com.cn