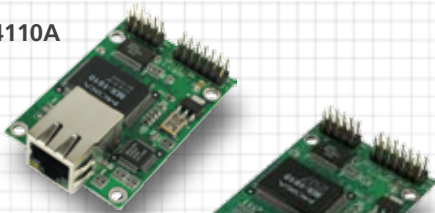


# NE-4100 Series

*100 Mbps Embedded Network Enabler for Serial Devices*

NE-4110S/4110A



NE-4120S/4120A



NE-4100T



## Features

- 10/100 Mbps Ethernet interface, 230.4 Kbps Serial interface
- Supports TCP Server/Client, UDP, and Real COM operation modes
- Supports DHCP, BootP, Static IP, and ARP
- Supports SNMP and Email Alert functions for event trapping and notification
- Half the size of a credit card—only 57 × 40 mm
- Single +5V input, 1.5W low power consumption



## Overview

MOXA NE-4100 Series Network Enablers are designed for manufacturers who want to add sophisticated network connectivity to their products. Any device with a standard serial interface can connect to Ethernet with MOXA Network

Enablers in a snap. NE-4110 Series provides a 10/100 Mbps Ethernet interface with ready-to-use TCP Server/Client and UDP, and a Real COM driver is also included for backward compatibility with the original software.

## SNMP and Email Alert for Event Trap/Notification

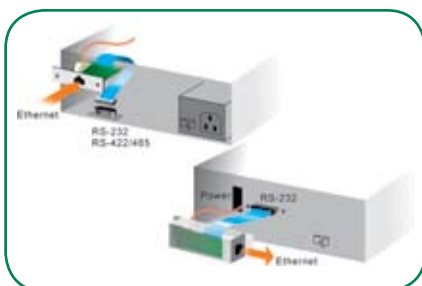
NE-4100 Series will send SNMP trap or Emails when the following conditions occur:

- Cold/Warm start
- Password authentication fails
- DSR/DCD line signal changes
- IP Setting changes
- Password changes

## NE-4100-CMD Series—Lets you configure on-site

- Easy to configure network settings on-site
- Simple command frame format
- Comprehensive readable command set for network settings and serial settings
- Easily switch between Software and Hardware Trigger Types
- Software Reset available

## Typical Installation Examples



**Stand-alone Type**  
(RJ45 Ethernet, NE-4110 Series)



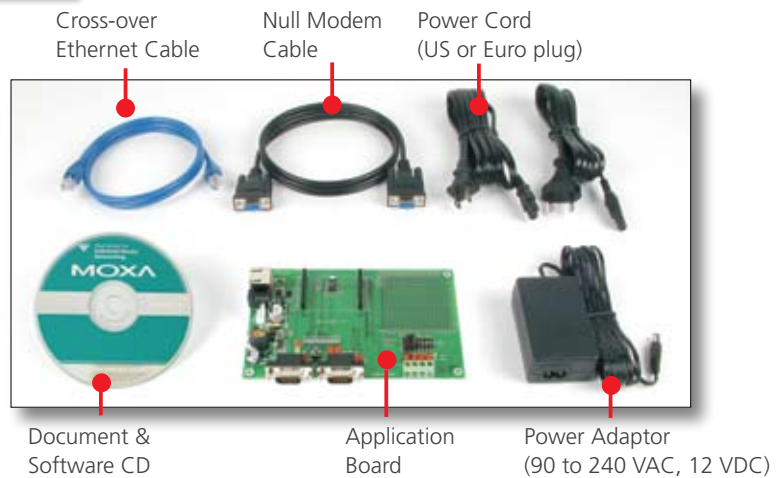
**Stand-alone Type**  
(Pin header Ethernet, NE-4120 Series)



**Drop-in Type**  
(Dual-in-line pin header, NE-4100T)

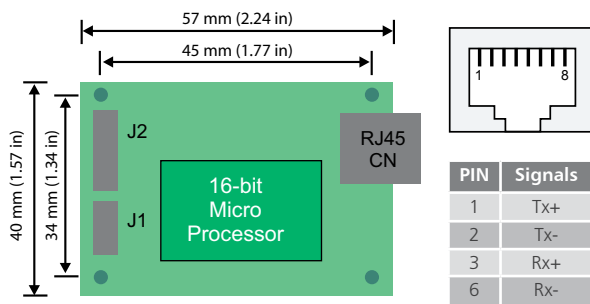
## NE-4100 Series Starter Kit

MOXA's Network Enabler Starter Kits, which include an evaluation board, power adaptor, Ethernet and serial cables, and software CD-ROM, let you evaluate all Network Enabler functions quickly and easily. The evaluation board is equipped with serial, Ethernet, digital I/O, and power circuits that help you evaluate the Network Enabler modules.

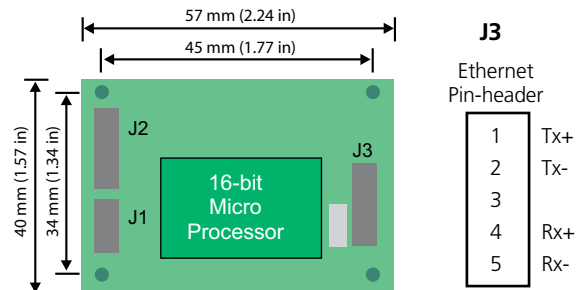


## Pin Assignment

### NE-4110S/4110A



### NE-4120S/4120A



### NE-4110/4120 Series

J2			
GND	14	13	VCC(+5V)
GND	12	11	VCC(+5V)
DIO0	10	9	10M_LED
DIO1	8	7	100M_LED
DIO2	6	5	Ready_LED
DIO3	4	3	Reset
TxD1	2	1	RxD1

### NE-4110S/4120S

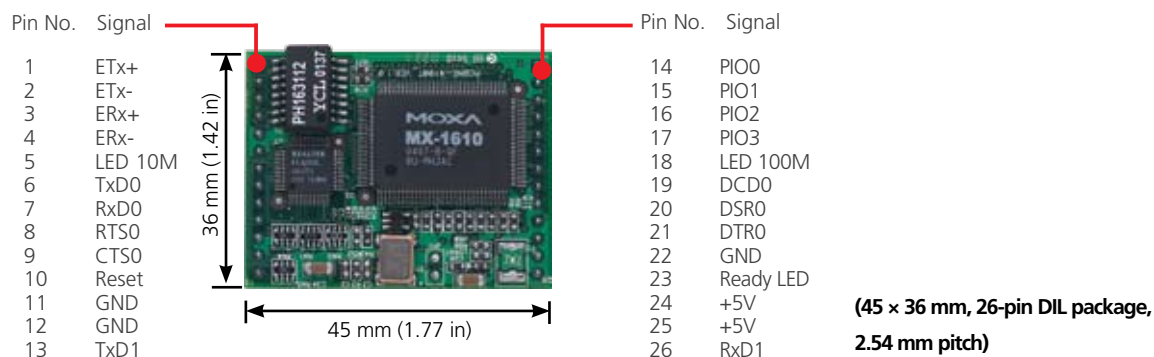
J1			
NC	10	9	NC
CTS0	8	7	RTS0
DSR0	6	5	GND
DTR0	4	3	TxD0
RxD0	2	1	DCD0

### NE-4110A/4120A

J1			
NC	10	9	NC
NC	8	7	NC
NC	6	5	GND
RxD- (Data-)	4	3	RxD+ (Data+)
TxD+	2	1	TxD-

For 2-wire RS-485 mode, Pin 3 is Data+, Pin 4 is Data-.

### NE-4100T



## Ordering Information

<b>NE-4110S:</b> 100 Mbps Network Enabler for RS-232 devices, with RJ45 Ethernet connector
<b>NE-4110A:</b> 100 Mbps Network Enabler for RS-422/485 devices, with RJ45 Ethernet connector
<b>NE-4120S:</b> 100 Mbps Network Enabler for RS-232 devices, with 5-pin Ethernet pin header
<b>NE-4120A:</b> 100 Mbps Network Enabler for RS-422/485 devices, with 5-pin Ethernet pin header
<b>NE-4100T:</b> 100 Mbps Network Enabler for TTL devices, with DIL package
<b>NE-4110S-CMD:</b> Serial Command Version, 100 Mbps Network Enabler for RS-232 devices, with RJ45 Ethernet connector
<b>NE-4110A-CMD:</b> Serial Command Version, 100 Mbps Network Enabler for RS-422/485 devices, with RJ45 Ethernet connector
<b>NE-4120S-CMD:</b> Serial Command Version, 100 Mbps Network Enabler for RS-232 devices, with 5-pin Ethernet pin header
<b>NE-4120A-CMD:</b> Serial Command Version, 100 Mbps Network Enabler for RS-422/485 devices, with 5-pin Ethernet pin header
<b>NE-4100T-CMD:</b> Serial Command Version, 100 Mbps Network Enabler for TTL devices, with DIL package
<b>NE-4110-ST:</b> Starter Kit for NE-4110 Series
<b>NE-4120-ST:</b> Starter Kit for NE-4120 Series
<b>NE-4100-ST:</b> Starter Kit for NE-4100T Series

## Specifications

### Form Factor

#### Type:

NE-4110/4120 Series: Stand-alone module, ready-to-go

NE-4100T Series: 26-pin dual-in-line package

**Dimensions:** NE-4110/4120 Series: 57 × 40 mm

NE-4100T Series: 45 × 36 mm

### LAN Interface

**Type:** 10/100 Mbps auto-sensing MDI/MDIX

**Protection:** 1.5 KV isolation

**Connector:** NE-4110 Series: RJ45 connector

NE-4120 Series: 5-pin Pin Header

### Serial Interface

#### Port 1:

NE-4110S/4120S: RS-232

NE-4110A/4120A: RS-422/RS-485 (2-wire)/RS-485 (4-wire)

NE-4100T: serial (TTL)

**Port 2:** serial (TTL) console port

#### Serial Signals

**RS-232:** TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

**RS-422:** Tx+, Tx-, Rx+, Rx-, GND

**RS-485:** Data+, Data-, GND with ADDC™  
(Automatic Data Direction Control)

**TTL (Port 1):** TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

**TTL (Port 2):** TxD, RxD, GND

### Serial Parameters

**Parity:** None, Even, Odd, Space, Mark

**Data Bits:** 5, 6, 7, 8

**Stop Bits:** 1, 1.5, 2

**Flow Control:** RTS/CTS, XON/XOFF

**Speed:** 110 bps to 230.4 Kbps

### Digital I/O Pins

Four programmable I/O pins (GPIO)

### Software Features

**Protocols:** ICMP, ARP, IP, TCP, UDP, DHCP, Telnet, HTTP, SNMP, SMTP

**Utilities:** Newwork Enabler Administration Suite for Windows 95/98/ME/NT/2000/XP/2003

**OS Driver Support:** Windows 95/98/ME/NT/2000/XP/2003/XP x64/2003 x64 COM driver, Linux real TTY, Unix

**Configuration:** Web/Serial/Telnet Console, or Windows Utility

**Operation Modes:** TCP Server, TCP Client, UDP, Real COM Driver (supporting Windows 98/NT/2000/XP)

### Power Requirements

**Power input:** 5 VDC, +/- 5%

**Power consumption:** 290 mA @ 5 VDC (max.)

### Temperature/Humidity

**Operation:** 0 to 70°C (32 to 158°F), 5 to 95% RH

**Storage:** -20 to 85°C (-4 to 185°F), 5 to 95% RH

### Regulatory Approvals

#### EMC:

CE: Class A

FCC: Class A

**Warranty:** 5 years