

NE-4100 Series

100Mbps Embedded Network Enabler for Serial Devices

Features

- Ready-to-go Serial-to-Ethernet module to network enable any serial (RS-232/422/485, TTL) device
- 10/100 Mbps Ethernet interface, 115.2 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 function for event trapping and notification
- Half the size of a credit card, only 57 × 40 mm
- Single +5V input, 1.5W low power consumption
- C-programmable version available upon request



NE-4110S
NE-4110A



NE-4120S
NE-4120A



NE-4100T

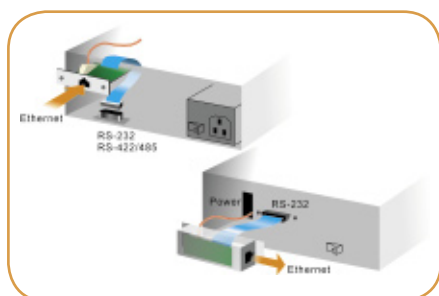
MOXA NE-4100 Series Network Enablers are designed for manufacturers who want to add sophisticated network connectivity to their products. Any device with a standard serial interface can now connect to Ethernet through Moxa Network Enablers in a snap. NE-4110 Series provides a 10/100 Mbps Ethernet interface 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
- IP Setting changes
- Password authentication fails
- Password changes
- DSR/DCD line signal changes

Typical Installation Examples



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



Stand-alone Type
(Pin header Ethernet, NE-4110 Series)



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

Specifications

Form Factor

Type:

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

NE-4100T: 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

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-485 (2-wire) or 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: 50 bps to 115.2 Kbps

Digital I/O Pins

Four programmable IO pins (GPIO)

Software Features

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

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

Management

Management Tools: Windows Administration Utility, Web browser, telnet console, serial console, and NECI (.DLL) for developing users' own management utility

SNMP trap: Cold/Warm start, IP setting changed, Password authentication failure, Password changed, DSR/DCD line signal changed

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

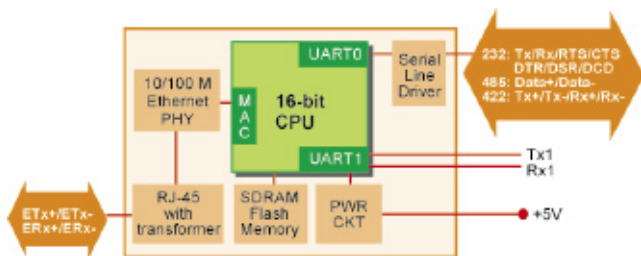
FCC Class A, CE Class A

Warranty

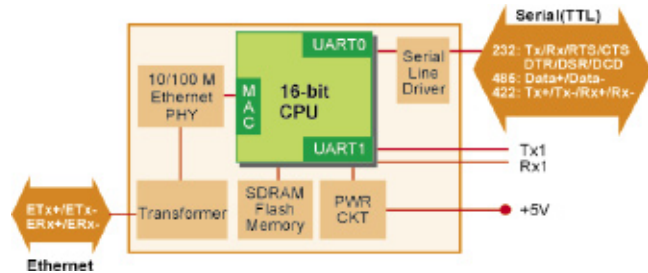
5 years

Block Diagram

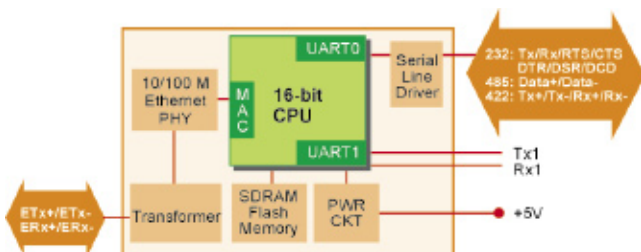
NE-4110 Series Block Diagram



NE-4100T Block Diagram



NE-4120 Series Block Diagram



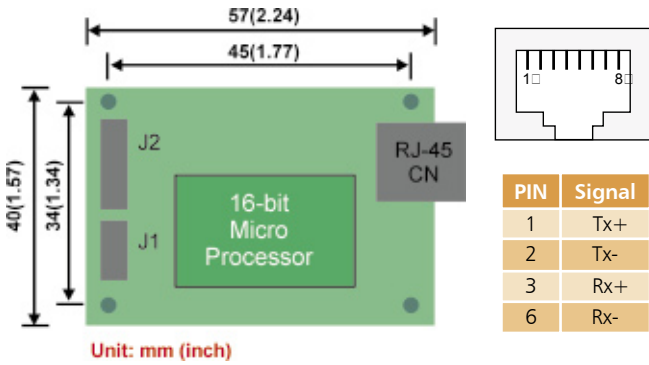
User Programmable version

NE-4100 Series provides a special C-programmable version upon request, allowing device manufacturers to fully customize the function of NE-4100 Series. Please visit Moxa web site for more detailed information.

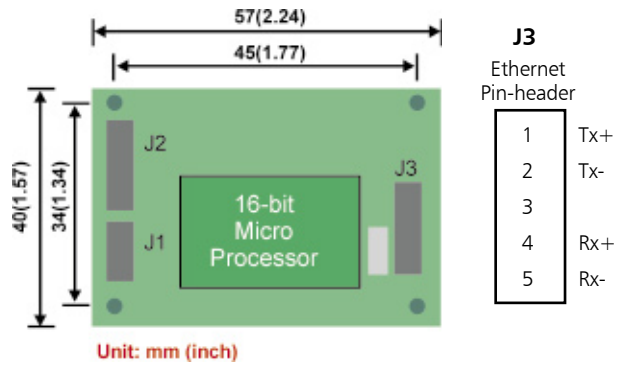
Embedded Network Enabler Solutions

100 Mbps NE-4110/4120 Series Pin Assignments and Dimensions

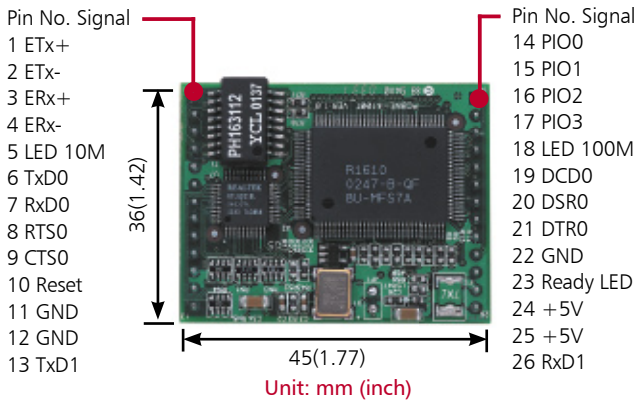
NE-4110S/4110A



NE-4120S/4120A



NE-4100T Pin Assignments



(45 × 36 mm, 26-pin DIL package, 2.54 mm pitch)

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-4110/4120 Series

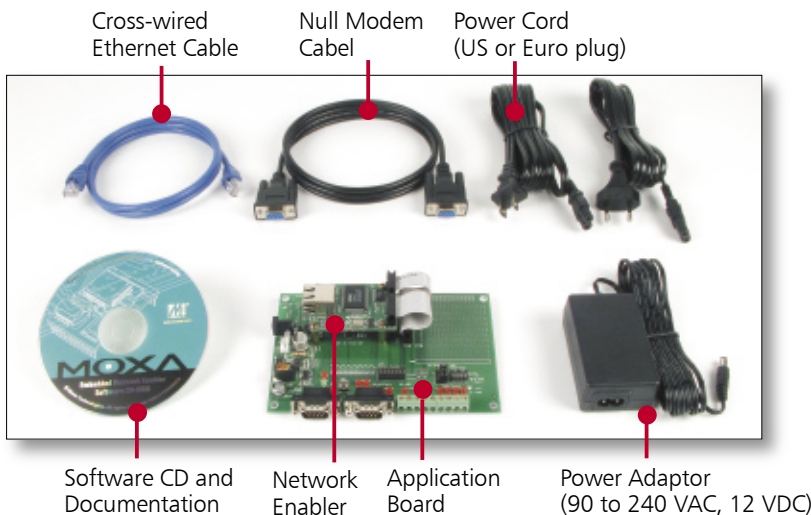
J2		
GND	14 13	VCC(+5V)
GND	12 11	VCC(+5V)
DIO0	10 9	10M_LED
DIO1	8 7	100M_LED
DIO2	6 5	Ready_LED
DIO3	4 3	Reset
TxD1	2 1	RxD1

NE-4110A/4120A

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

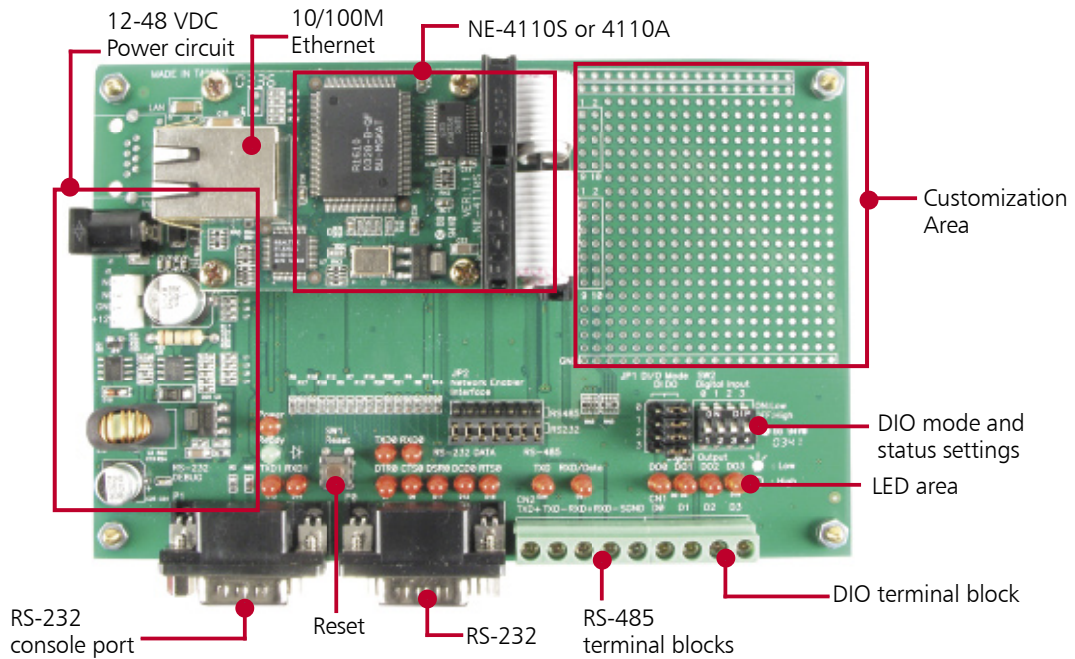
* For 2-wire RS-485 mode, Pin 3 is Data+, Pin 4 is Data-

Get Going with Moxa's Starter Kit

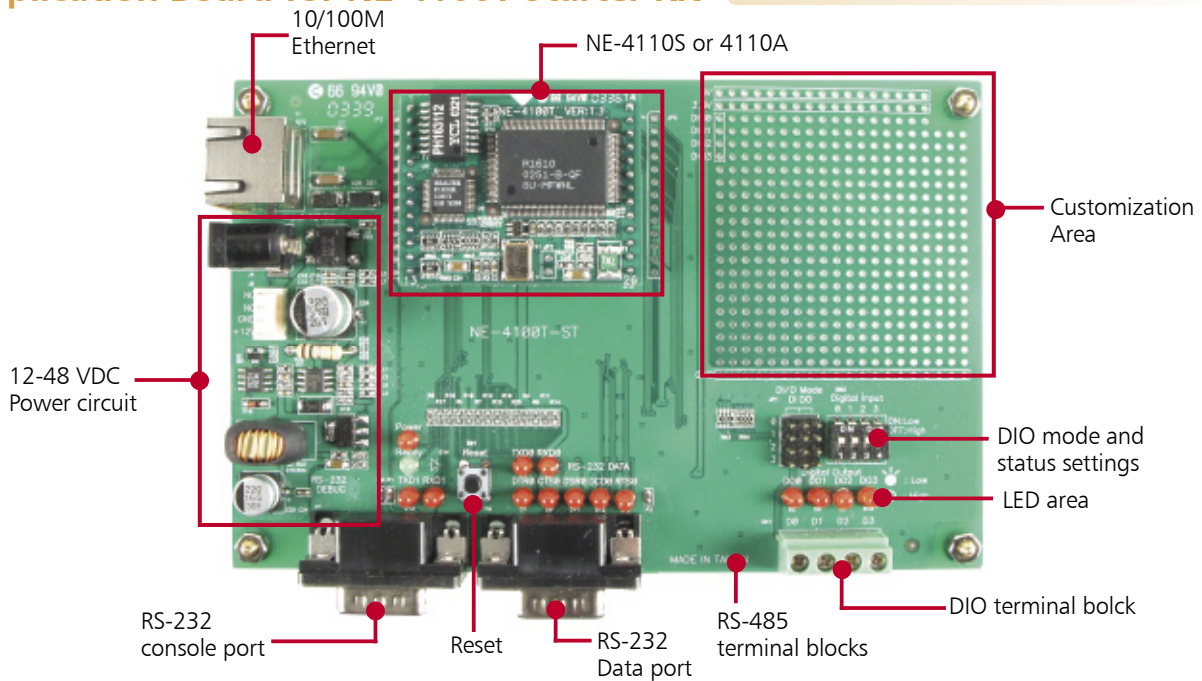


The MOXA Network Enabler Starter Kit lets you evaluate all Network Enabler functions right away. It supplies an application board, power adaptor, Ethernet and serial cables, and software CD-ROM. The application board is equipped with serial, Ethernet, digital I/O, and power circuits that help you evaluate the Network Enabler modules.

Application Board for NE-4110S/A Starter Kit



Application Board for NE-4100T Starter Kit



Ordering Information

- NE-4110S:** 100 Mbps Network Enabler for RS-232 devices, with RJ45 Ethernet connector
- NE-4110A:** 100 Mbps Network Enabler for RS-422/485 devices, with RJ45 Ethernet connector
- NE-4120S:** 100 Mbps Network Enabler for RS-232 devices, with 5-pin Ethernet pin header
- NE-4120A:** 100 Mbps Network Enabler for RS-422/485 devices, with 5-pin Ethernet pin header
- NE-4100T:** 100 Mbps Network Enabler for TTL devices, with DIL package
- NE-4110S-ST:** Starter Kit for NE-4110S
- NE-4100T-ST:** Starter Kit for NE-4100T
- NE-4110A-ST:** Starter Kit for NE-4110A

*To order the programmable version of the NE-4100 Series module, add "-P" to the end of the model name. The available programmable models are NE-4110S-P, NE-4110A-P, NE-4120S-P, NE-4120A-P, NE-4100T-P.