

NE-4100 Series

100 Mbps Embedded Network Enabler for Serial Devices

Features

- Ready-to-go Serial-to-Ethernet module to network enable any serial device (RS-232/422/485, TTL)
- 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 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



NE-4110S
NE-4110A



NE-4120S
NE-4120A



NE-4100T

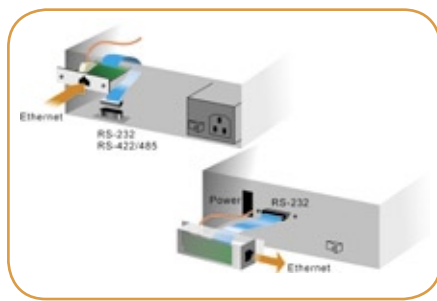
MOXA NE-4100 Series Network Enablers are designed for manufacturers who want to add sophisticated network connectivity to their products. Any device with a standard serial interface can now connect to Ethernet with Moxa Network Enablers in a snap. NE-4110 Series provides a 10/100 Mbps Ethernet interface 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

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 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

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: 50 bps to 115.2 Kbps

Digital I/O Pins

Four programmable I/O 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

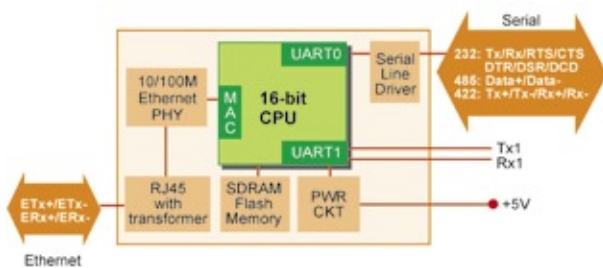
FCC Class B, CE Class B

Warranty

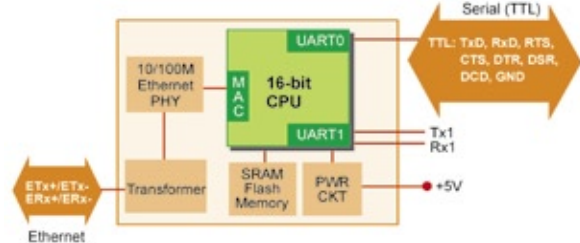
5 years

Block Diagram

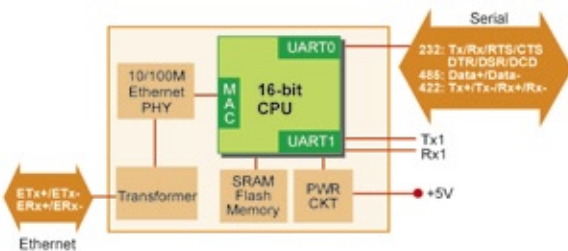
NE-4110 Series Block Diagram



NE-4100T Block Diagram

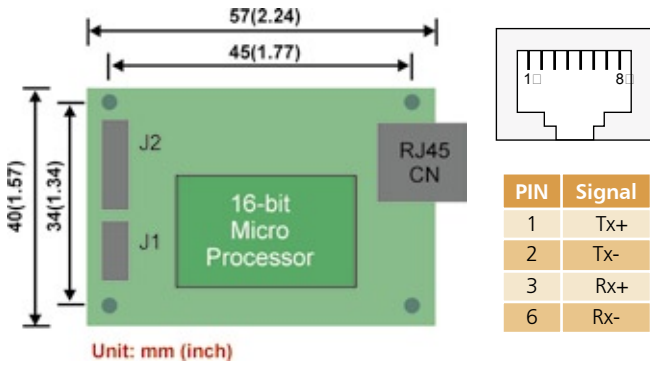


NE-4120 Series Block Diagram

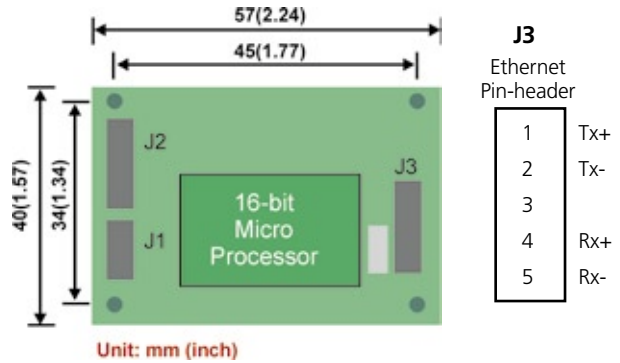


100 Mbps NE-4110/4120 Series Pin Assignments and Dimensions

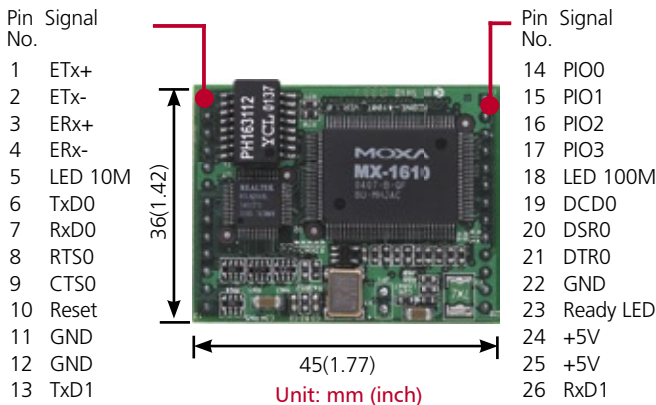
NE-4110S/4110A



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

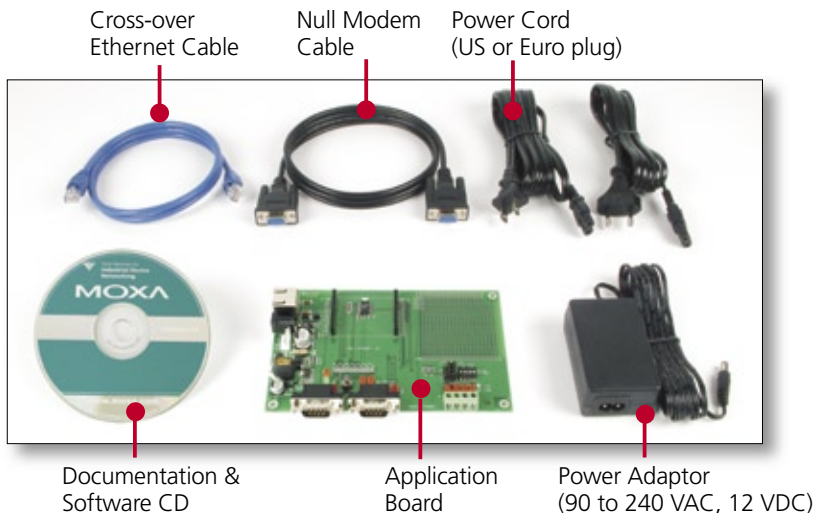
J2	
GND	14 13 VCC(+5V)
GND	12 11 VCC(+5V)
DIO0	10 9 10M_LED
DIO1	8 7 100M_LED
DIO2	6 5 Ready_LED
DIO3	4 3 Reset
TxD1	2 1 RxD1

NE-4110A/4120A

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

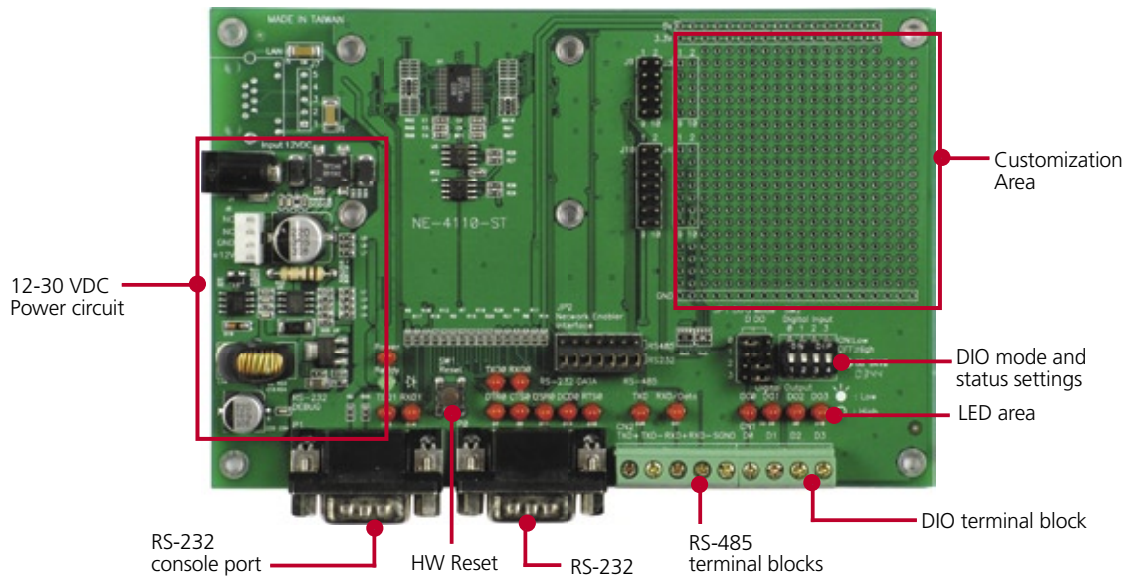


MOXA's Network Enabler Starter Kits, which include an evaluation board, power adaptor, Ethernet and serial cables, and software CD-ROM, let you evaluate all Network Enabler functions quickly and easily. The evaluation board is equipped with serial, Ethernet, digital I/O, and power circuits that help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

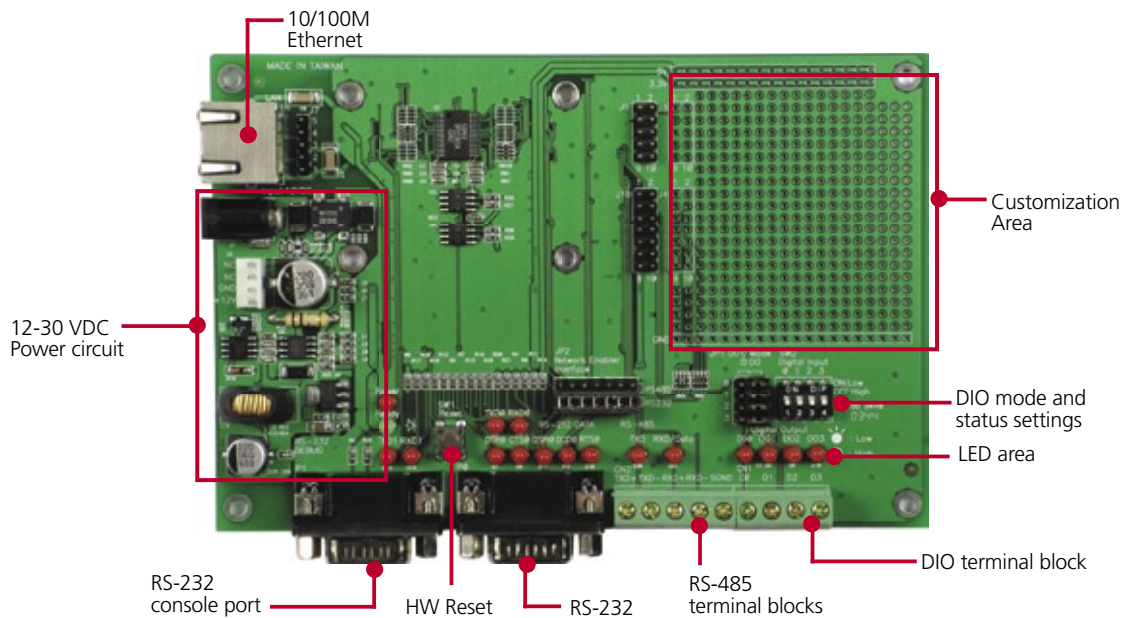
How to Select the NE-4100 Series Starter Kit

Starter Kit	NE-4100 Series Module		
	Standard Version	Programmable Version	Serial Command Version
NE-4100-ST	NE-4100T	NE-4100T-P	NE-4100T-CMD
NE-4110-ST	NE-4110S	NE-4110S-P	NE-4110S-CMD
	NE-4110A	NE-4110A-P	NE-4110A-CMD
NE-4120-ST	NE-4120S	NE-4120S-P	NE-4120S-CMD
	NE-4120A	NE-4120A-P	NE-4120A-CMD

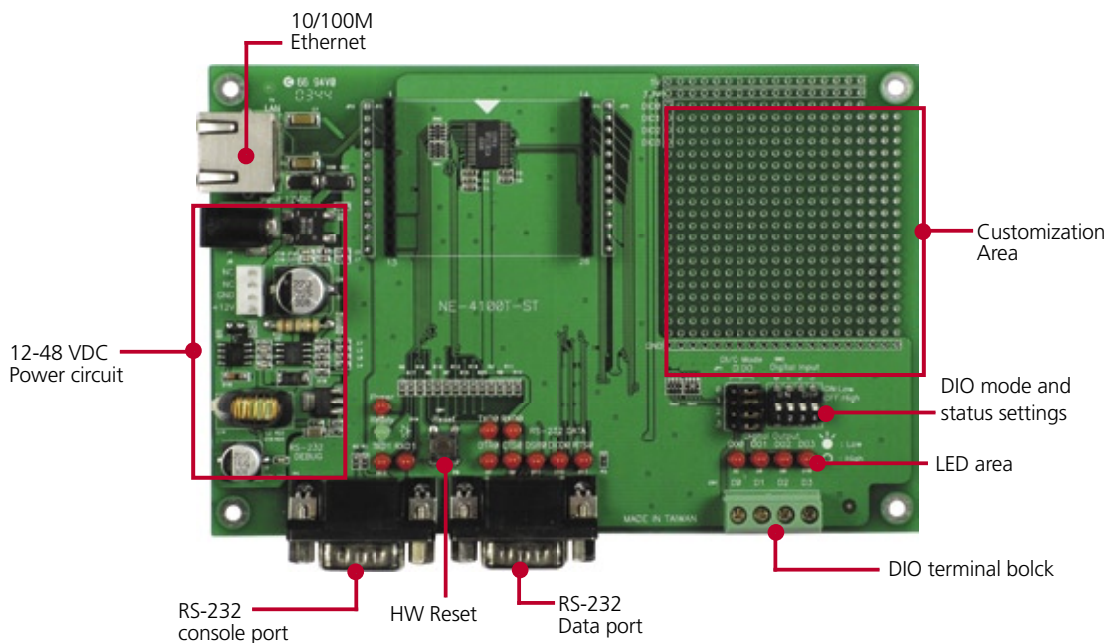
NE-4110-ST Evaluation Board



NE-4120-ST Evaluation Board



NE-4100-ST Evaluation Board



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