

# NE-4100 Series

## 10/100 Mbps embedded serial device servers



### Features and Benefits

- 10/100 Mbps Ethernet interface
- Supports baudrates up to 230.4 kbps
- Choice of operation modes: Real COM, TCP Server, TCP Client, and UDP
- Supports DHCP, BootP, Static IP, and ARP
- SNMP and email alerts for event trapping and notifications
- Half the size of a credit card—only 57 × 40 mm
- Low power consumption at 1.5 W, with single +5 V input

### Certifications



## Introduction

Moxa's NE-4100 embedded device servers are designed for manufacturers who want to add sophisticated network connectivity to their serial devices. Moxa's embedded device servers can be used to convert any device with a standard serial interface to an Ethernet-enabled device in no time. The NE-4100 embedded device servers support 10/100 Mbps Ethernet, and provide ready-to-use operation modes, including TCP Server, TCP Client, and UDP. In addition, a Real COM driver is included for backward compatibility with legacy software.

### SNMP and Email Alerts for Event Trap and Notification

NE-4100 embedded device servers can be configured to send an SNMP trap or email under the following conditions:

- Cold/warm start
- Password authentication failure
- Change in DSR/DCD line signal
- Change in IP address
- Change in password

## Specifications

### Platform

CPU	16-bit MCU
-----	------------

### Memory

Flash	2 MB
SDRAM	1 MB

### Input/Output Interface

Configurable DIO Channels (by software)	4
---	---

### Ethernet Interface

10/100BaseT(X) Ports, Auto MDI/MDI-X	NE-4120S/4120A: 5-pin pin header NE-4100T: 26-pin dual-in-line NE-4110S/4110A: 8-pin RJ45
Magnetic Isolation Protection	1.5 kV (built-in)
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3x for flow control

## Ethernet Software Features

Configuration Options	Web Console (HTTP), Windows Utility, Telnet Console, Serial Console
Management	ARP, Device Search Utility (DSU), DHCP Client, HTTP, IPv4, SMTP, SNMPv1/v2c, TCP/IP, Telnet, UDP, Web Console, ICMP
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2/2016/2019 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded
Linux Real TTY Drivers	Kernel versions: 2.4.x, 2.6.x, 3.x, 4.x, and 5.x
Fixed TTY Drivers	SCO UNIX, SCO OpenServer, UnixWare 7, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i, Mac OS X
Android API	Android 3.1.x and later

## Serial Interface

No. of Ports	2 (1 for serial interface, 1 for TTL console port)
Serial Standards	NE-4110S/4120S Series: RS-232 NE-4110A/4120A Series: RS-422, RS-485 NE-4100T Series: TTL
Operation Modes	Real COM mode, TCP Client mode, TCP Server mode, UDP mode
Baudrate	110 bps to 230.4 kbps
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	None, RTS/CTS, DTR/DSR, XON/XOFF

## Serial Signals

RS-232	NE-4110S/4120S: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	NE-4110A/4120A: TX+, TX-, RX+, RX-, GND
RS-485-4w	NE-4110A/4120A: TX+, TX-, RX+, RX-, GND
RS-485-2w	NE-4110A/4120A: Data+, Data-, GND

## Power Parameters

Input Voltage	5 VDC
Power Consumption	290 mA @ 5 VDC

## Physical Characteristics

Dimensions	NE-4110/4120: 57 x 40 mm (2.24 x 1.57 in) NE-4100T: 45 x 36 mm (1.77 x 1.42 in)
Weight	NE-4110S/4110A: 40 g (0.09 lb) NE-4120S/4120A/4100T: 20 g (0.04 lb)
Form Factor Type	NE-4110/4110A/4120S/4120A: Ready-to-go pin header modules NE-4100T: Drop-in modules

## Environmental Limits

Operating Temperature	Standard Models: 0 to 55°C (32 to 131°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 60°C (-40 to 140°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

## Standards and Certifications

EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF
Environmental Testing	IEC 60068-2-1 IEC 60068-2-3 IEC 60068-2-14

## Declaration

Green Product	RoHS, CRoHS, WEEE
---------------	-------------------

## MTBF

Time	NE-4100T: 288,173 hrs NE-4110S: 290,276 hrs NE-4110A/4120S/4120A: 289,573 hrs
------	---

Standards	Telcordia SR332
-----------	-----------------

## Warranty

Warranty Period	5 years
-----------------	---------

Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>
---------	--

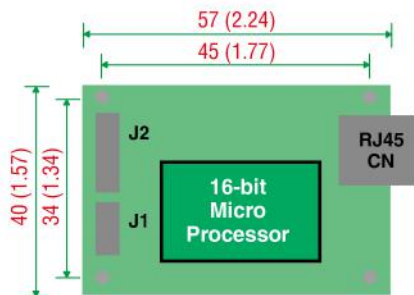
## Package Contents

Device	1 x NE-4100 Series device server
--------	----------------------------------

## Dimensions

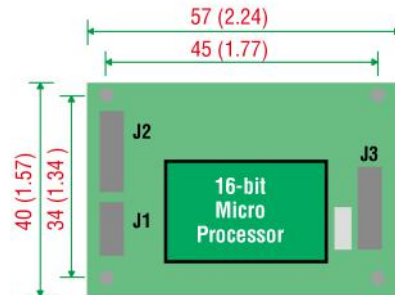
### NE-4110S/4110A

Unit: mm (inch)



### NE-4120S/4120A

Unit: mm (inch)



## Ordering Information

Model Name	Ethernet Interface	Serial Standards	Operating Temp.	Form Factor Type
NE-4100T	26-pin dual-in-line	TTL signals	0 to 55°C	Drop-in module
NE-4100T-T	26-pin dual-in-line	TTL signals	-40 to 75°C	Drop-in module
NE-4110S	RJ45	RS-232	0 to 55°C	Ready-to-go pin header module
NE-4110S-T	RJ45	RS-232	-40 to 75°C	Ready-to-go pin header module
NE-4110A	RJ45	RS-422/485	0 to 55°C	Ready-to-go pin header module
NE-4110A-T	RJ45	RS-422/485	-40 to 75°C	Ready-to-go pin header module
NE-4120S	5-pin pin header	RS-232	0 to 55°C	Ready-to-go pin header module
NE-4120S-T	5-pin pin header	RS-232	-40 to 75°C	Ready-to-go pin header module
NE-4120A	5-pin pin header	RS-422/485	0 to 55°C	Ready-to-go pin header module
NE-4120A-T	5-pin pin header	RS-422/485	-40 to 75°C	Ready-to-go pin header module

© Moxa Inc. All rights reserved. Updated Jun 24, 2020.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.