

NE-4100 Series

10/100 Mbps embedded serial device servers

NE-4110S/4110A



NE-4120S/4120A

NE-4100T



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



Overview

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.

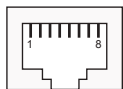
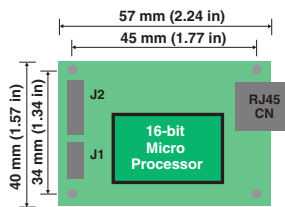
SNMP and E-mail Alerts for Event Trap and Notification

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

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

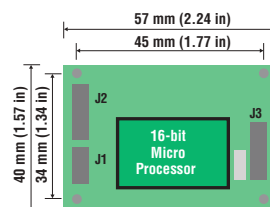
Dimensions and Pin Assignment

NE-4110S/4110A



PIN	Signals
1	Tx+
2	Tx-
3	Rx+
6	Rx-

NE-4120S/4120A



J3 Ethernet Pin-header

1	Tx+
2	Tx-
3	
4	Rx+
5	Rx-

NE-4110/4120 Series

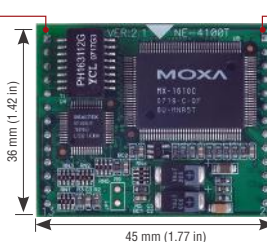
J2	
GND	14 13 VCC(+5V)
GND	12 11 VCC(+5V)
DIO0	10 9 10M_LED
DIO1	8 7 100M_LED
DIO2	6 5 Ready_LED
DIO3	4 3 Reset
TxD1	2 1 RxD1

NE-4110S/4120S

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

NE-4110T

Pin No.	Signal
1	ETx+
2	ETx-
3	ERx+
4	ERx-
5	LED 10M
6	TxD0
7	RxD0
8	RTS0
9	CTS0
10	Reset
11	GND
12	GND
13	TxD1



Pin No.	Signal
14	PI00
15	PI01
16	PI02
17	PI03
18	LED 100M
19	DCDO
20	DSR0
21	DTR0
22	GND
23	Ready LED
24	+5V
25	+5V (45 × 36 mm, 26-pin DIL package, 2.54 mm pitch)
26	RxD1

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-

Specifications

Form Factor

Type:

NE-4110/4120: Ready-to-go pin header modules

NE-4100T: Drop-in module

Dimensions:

NE-4110/4120: 57 × 40 mm (2.24 x 1.57 in)

NE-4100T: 45 × 36 mm (1.77 x 1.42 in)

Weight:

NE-4110S/4110A: 40 g

NE-4120S/4120A/4100T: 20 g

Ethernet Interface

Number of Ports: 1

Speed: 10/100 Mbps, auto MDI/MDIX

Magnetic Isolation Protection: 1.5 kV built-in

Connector:

NE-4110 Series: RJ45

NE-4120 Series: 5-pin pin header

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

Serial Interface

Number of Ports: 2

Serial Standards:

• Port 1:

NE-4110S/4120S: RS-232

NE-4110A/4120A: RS-422, RS-485-4w, RS-485-2w

NE-4100T: TTL

• Port 2:

TTL console port

RS-485 Data Direction Control: ADDC® (automatic data direction control)

Serial Communication Parameters

Data Bits: 5, 6, 7, 8

Stop Bits: 1, 1.5, 2

Parity: None, Even, Odd, Space, Mark

Flow Control: DSR/DTR and RTS/CTS (RS-232 only), XON/XOFF

Baudrate: 110 bps to 230.4 kbps

Serial Signals

TTL:

• Port 1: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

• Port 2: TxD, RxD, GND

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

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

RS-485-4w: Tx+, Tx-, Rx+, Rx-, GND

RS-485-2w: Data+, Data-, GND

Digital I/O Pins

GPIO: 4 programmable I/O pins

Software

Network Protocols: ICMP, ARP, IPv4, TCP, UDP, DHCP, Telnet, HTTP, SNMP V1/V2c, SMTP

Configuration Options: Web Console, Serial Console, Telnet Console, Windows Utility

Windows Real COM Drivers: Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded

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

Linux Real TTY Drivers: Linux 2.4.x, 2.6.x, 3.x

Operation Modes: Real COM, TCP Server, TCP Client, UDP

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: -40 to 60°C (-40 to 140°F)

Ambient Relative Humidity: 5 to 95% (non-condensing)

Altitude: Up to 2000 m

Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.

Power Requirements

Input Voltage: 5 VDC (±5%)

Power Consumption: 290 mA @ 5 VDC max.

Standards and Certifications

EMC: CE, FCC

EMI: EN 55022 Class B, FCC Part 15 Subpart B Class A

EMS:

EN 55024,

EN 61000-4-2 (ESD),

EN 61000-4-3 (RS),

EN 61000-4-4 (EFT),

EN 61000-4-5 (Surge),

EN 61000-4-6 (CS),

EN 61000-4-8,

EN 61000-4-11

Green Product: RoHS, CRoHS, WEEE

Reliability

Automatic Reboot Trigger: Built-in WDT (watchdog timer)

MTBF (mean time between failures):

NE-4100T: 288,173 hrs

NE-4110A: 289,573 hrs

NE-4110S: 290,276 hrs

NE-4120A: 289,573 hrs

NE-4120S: 289,573 hrs

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

: Ordering Information

Available Modules

NE-4110S: Device server module for RS-232 devices, supports 10/100BaseT(x) with RJ45 connector

NE-4110A: Device server module for RS-422/485 devices, supports 10/100BaseT(x) with RJ45 connector

NE-4120S: Device server module for RS-232 devices, supports 10/100BaseT(x) with 5-pin Ethernet pin header

NE-4120A: Device server module for RS-422/485 devices, supports 10/100BaseT(x) with 5-pin Ethernet pin header

NE-4100T: Device server module for TTL devices, supports 10/100BaseT(x) with DIL package

NE-4110S-T: Device server module for RS-232 devices, supports 10/100BaseT(x) with RJ45 connector, -40 to 75°C operating temperature

NE-4110A-T: Device server module for RS-422/485 devices, supports 10/100BaseT(x) with RJ45 connector, -40 to 75°C operating temperature

NE-4120S-T: Device server module for RS-232 devices, supports 10/100BaseT(x) with 5-pin Ethernet pin header, -40 to 75°C operating temperature

NE-4120A-T: Device server module for RS-422/485 devices, supports 10/100BaseT(x) with 5-pin Ethernet pin header, -40 to 75°C operating temperature

NE-4100T-T: Device server module for TTL devices, supports 10/100BaseT(x) with DIL package, -40 to 75°C operating temperature

Available Starter Kits

NE-4110-ST: Starter kit for the NE-4110S and NE-4110A (module not included)

NE-4120-ST: Starter kit for the NE-4120S and NE-4120A (module not included)

NE-4100-ST: Starter kit for the NE-4100T (module not included)

Note: Starter kits do not include the module. Please order modules and evaluation kits separately.

Package Checklist (modules)

- NE-4100 series module

Package Checklist (starter kits)

- Evaluation board
- Universal power adaptor
- 2 power cords
- Null modem cable
- Cross-over Ethernet cable
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card