

NE-4120A

10/100M Ethernet Network Enabler for RS-422/485 Devices

- RS-422/485 to 10/100M auto-sensing Ethernet mini card for embedded device networking
- Compact size (57 x 40 mm)
- Ready-to-use TCP/IP firmware for fast integration
- TCP Server, TCP Client, UDP, Real COM driver operation modes
- Easy configuration with Web browser, serial console, Telnet console or Windows utility
- Low power consumption (1.5W)
- Dedicated 4 GPIO for user's applications
- C-Programmable version available



Overview

NE-4120A offers a complete Ethernet connection solution (TCP Server, TCP Client, UDP) to network-enable your serial devices. With its compact size---only 57 x 40 mm, or less than half the size of your credit card---you can easily integrate NE-4120A into your serial device to make the device 10/100M Ethernet-ready.

Industrial-proven, built-in TCP/IP stack

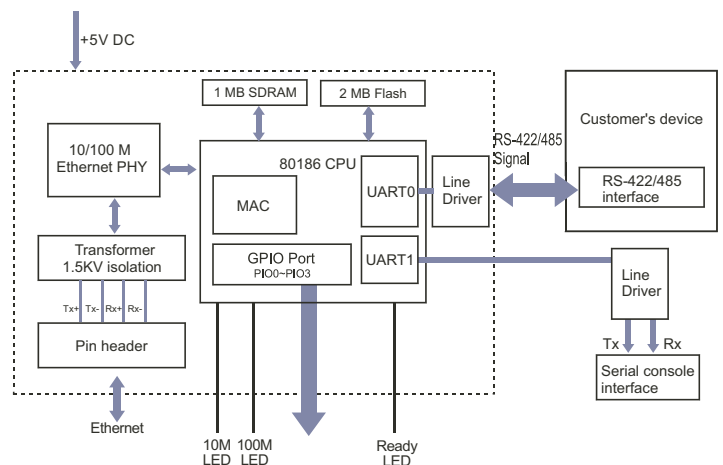
NE-4120A's industrial-proven, built-in TCP/IP stack makes it easy for your R&D engineers to network-enable your serial device since they won't need to put a lot of effort into TCP/IP programming. The 10/100M Ethernet auto-sensing interface lets you enjoy the higher 100M speed when available. In addition, NE-4120A's 4 GPIO pins provide ample design flexibility, giving you the freedom to develop the features your customers need. The NE-4120A 5V design is better suited for today's equipment, and R&D engineers can spend less effort implementing the power circuit.

User-friendly configuration options

Configuration is done with a user-friendly Windows utility, Web browser, telnet console, or serial console. In addition, a Windows-based NECI (Network Enabler Configuration Interface) Library is available to help you develop your own Windows utilities.

Well-suited for any type of Ethernet connector

NE-4120A's ready-to-go design allows you to get your legacy serial devices Ethernet-ready easily, and is well-suited for any type of Ethernet connector because



of its pin-header design---just add on this module, without any circuit modification, and get your product to market in no time.

Programmable version meets your customization needs

A C-Programmable version is also available for customization applications such as protocol conversion, front end data processing, etc. The NE-4100 series Software Development Kit (SDK) includes a Turbo C compiler and more than 100 application program interfaces (API) for socket command and serial port control. Explanatory example programs are also available to reduce your software developing time.

Specifications

LAN

Ethernet: 10/100 Mbps auto-sensing
Protection: Built-in transformer with 1.5 KV magnetic isolation
Pins: ETx+, ETx-, ERx+, ERx-

Serial

Interface: RS-422/485 x 1, TTL x 1
Signals: RS-422: Tx+, Tx-, Rx+, Rx-, GND
 RS-485 (2-wire): Data+, Data-, GND
 TTL: 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

GPIO

GPIO: 4 Programmable DI or DO

Software Features

Protocols: ICMP, ARP, IP, TCP, UDP, DHCP, Telnet, HTTP, SNMP, SMTP
Operation Modes: TCP Server, TCP Client, UDP, Real COM
Utilities: Administration utility for Windows 95/98/ME/NT/2000/XP
Management: Web browser, serial console, telnet console or Windows utility library for developing your own utility
Configuration Interface: NECI library(.DLL) for developing your own utility

Power Requirements

Power input: 5 VDC, +/- 5%
Power consumption: 290 mA @ 5 VDC (Max.)

Environmental

Operating temperature: 0 to 70°C (32 to 158°F), 5 to 95% RH
Storage temperature: -20 to 85°C (-4 to 185°F), 5 to 95% RH

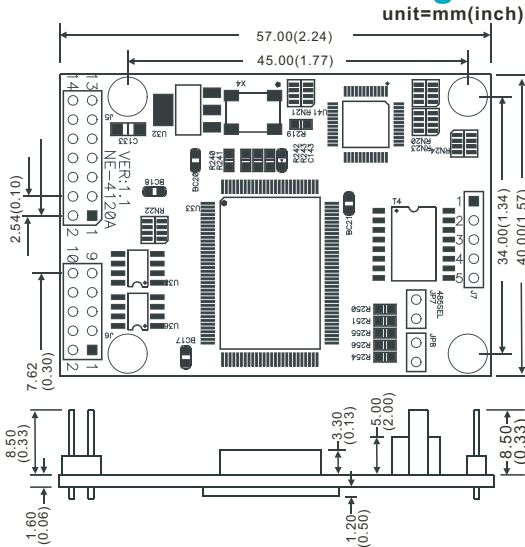
Regulatory Approvals

EMC: FCC Class A, CE Class A

Warranty

5-Year Manufacturer's Warranty

Dimensions and Pin Assignment



J1			J2			Ethernet Pin-header											
NC	10	9	NC	14	13	VCC(+5V)	<table border="1"> <tr><td>1</td><td>ETx+</td></tr> <tr><td>2</td><td>ETx-</td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td>ERx+</td></tr> <tr><td>5</td><td>ERx-</td></tr> </table>	1	ETx+	2	ETx-	3		4	ERx+	5	ERx-
1	ETx+																
2	ETx-																
3																	
4	ERx+																
5	ERx-																
NC	8	7	NC	12	11	VCC(+5V)											
NC	6	5	GND	10	9	10M_LED											
*RxD-	4	3	*RxD+	8	7	100M_LED											
TxD+	2	1	TxD-	6	5	Ready_LED											
				4	3	Reset											
				2	1	RxD1											

*For 2-wire RS-485 interface, pin 3 is for Data+ (B) and pin 4 is for Data- (A).

Applications

- Security/Surveillance (Card Readers, Biometric identification devices)
- Building Automation (HVAC, Fire alarm)
- Medical/Healthcare (ECG, Ultrasonic monitoring, Blood testing devices)
- Information Appliances (UPS monitor module)
- Industrial Automation (PLC, Metering device)

Ordering Information

NE-4120A 10/100M Network Enabler for RS-422/485 Devices
NE-4120A-ST NE-4120A Starter Kits



NE- 4120A-ST



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