

CP-104N Series

4-port RS-232 Mini PCI Express boards



Features and Benefits

- Mini PCIe interface support
- 921.6 kbps maximum baudrate for fast data transmission
- 128-byte FIFO and on-chip H/W, S/W flow control
- Drivers provided for a broad selection of operating systems, including Windows and Linux

Certifications



Introduction

The CP-104N is a Mini PCI Express multiport serial board designed for various applications such as industrial automation systems and industrial PC manufacturers. The CP-104N is compatible with any Mini PCI Express slot. The board requires only a 3.3 VDC power supply, which means it can work with host computers ranging from DIN-rail PCs to standard-sized PCs.

The CP-104N is a top choice of industrial automation engineers and system integrators and supports Windows and Linux operating systems. In addition, the four RS-232 serial ports support a fast 921.6 kbps baudrate. The CP-104N provides full-modem control signals to ensure compatibility with a wide range of serial peripherals. It also provides 1 kV line-to-line surge protection and 2.5 kV isolation (for the I model), ensuring compatibility in a wide range of industrial environments.

A New Family of Mini PCI Express Multiport Serial Boards for Faster Time to Market

Moxa's new Mini PCI Express multiport serial board family fulfills the need for customized expansion and enables faster time to market for OEMs and system integrators. It includes isolated and non-isolated RS-232/422/485 communication cards for various applications.

The serial boards feature high performance 16C950 compatible UARTs and are available in 4-port and 2-port versions compatible with all popular operating systems. They support data rates of up to 921.6 kbps and have 128-byte transmit and receive FIFOs. The serial boards can operate in the -40 to 85°C temperature range. Door brackets are included in the package for all models, enabling the installation of the serial boards in a Moxa IPC expansion slot.

Specifications

Serial Interface

Comm. Controller	16C550C compatible
Bus	Mini PCI Express
Connector	DB9 male
FIFO	128 bytes
No. of Ports	4
Serial Standards	RS-232
Baudrate	50 bps to 921.6 kbps (supports non-standard baudrates)
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark

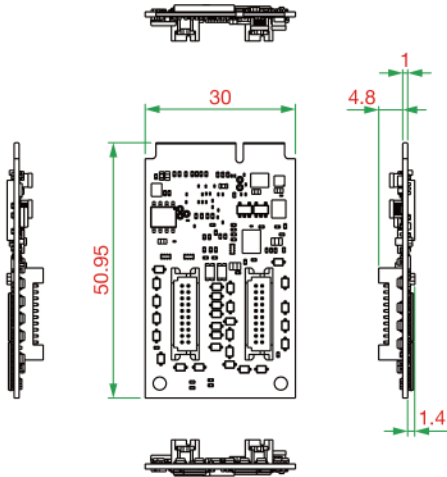
Flow Control	None, RTS/CTS, XON/XOFF
Isolation	2.5 kV (I models)
Serial Signals	
RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
Serial Software Features	
Windows Drivers	Windows 7/8/8.1/10/11 (x86/x64), Windows 2008 R2/2012/2012 R2/2016/2019 (x64), Windows Server 2022
Linux Drivers	Linux kernel 4.x, Linux kernel 5.x
Power Parameters	
Input Current	CP-104N-T: 365 mA @ 3.3 VDC CP-104N-I-T: 615 mA @ 3.3 VDC
Physical Characteristics	
Dimensions	30 x 50.95 mm (1.18 x 2 in)
Environmental Limits	
Operating Temperature	-40 to 85°C (-40 to 185°F)
Storage Temperature (package included)	-20 to 85°C (-4 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Standards and Certifications	
EMC	EN 55032/35
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: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF
Declaration	
Green Product	RoHS, CRoHS, WEEE
MTBF	
Time	CP-104N-T: 3,673,087 hrs CP-104N-I-T: 2,189,472 hrs
Standards	Telcordia (Bellcore) Standard TR/SR
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty
Package Contents	
Device	1 x CP-104N Series serial board
Cable	CP-104N-T: 2 x 20-pin female to 2 DB9 male serial cables, 25 cm CP-104N-I-T: 2 x 20-pin female to 20-pin female serial cable, 25 cm

Installation Kit	Door/CP-100N Port12, Door/CP-100N Port34
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

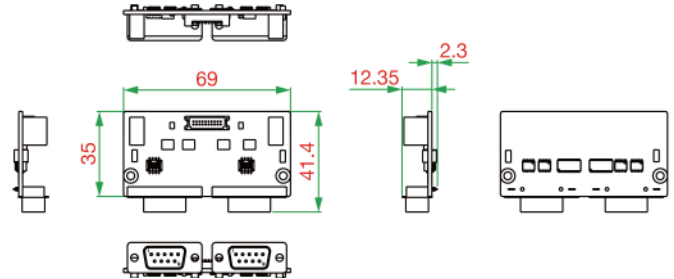
CP-104N-T

Unit: mm



CP-104N-I-T

Unit: mm



Ordering Information

Model Name	Serial Standards	No. of Serial Ports	Serial Isolation Protection
CP-104N-T	RS-232	4	-
CP-104N-I-T	RS-232	4	2.5 kV

Accessories (sold separately)

Connectors

Mini DB9F-to-TB	DB9 female to terminal block connector
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Cables

CBL-M9x2HSF2x10H-15	20-pin female to 2 DB9 male serial cables, 15 cm Applicable Models: CP-104N-T
CBL-HSF2x10-15	20-pin female to 20-pin female serial cable, 15 cm Applicable Models: CP-104N-I-T

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