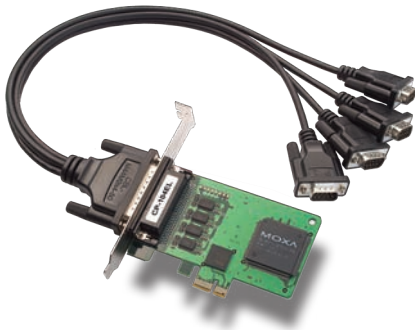


# CP-104EL

## 4-port RS-232 PCI Express serial board



- > PCI Express x1 compliant
- > 921.6 Kbps maximum baudrate for super fast data transmission
- > 128-byte FIFO and on-chip H/W, S/W flow control
- > Low profile form factor fits small-sized PCs
- > Drivers provided for Windows (2000, XP/2003/Vista/2008 x86/x64), Windows CE 5.0/6.0, Windows XP Embedded, DOS, Linux 2.4, Linux 2.6 (x86/x64) FreeBSD 4/5, QNX 6, SCO Open Server 5/6, UnixWare 7
- > Easy maintenance with on-board LEDs and management software
- > 15 KV ESD protection on the board



### Overview

The CP-104EL is a smart, 4-port PCI Express board designed for POS and ATM applications. It is a top choice of industrial automation engineers and system integrators, and supports many different operating systems, including Windows, Linux, and even Unix. In addition, each of the board's 4 RS-232 serial ports supports a super

fast 921.6 Kbps baudrate. The CP-104EL provides full modem control signals to ensure compatibility with a wide range of serial peripherals, and its PCI Express "x1" classification allows it to be installed in any PCI Express slot.

### Smaller Form Factor

The CP-104EL is a low profile board that is compatible with any PCI Express slot. The board requires only a 3.3 VDC power supply, which

means that the board fits any host computer, ranging from shoebox to standard-sized PCs.

### Top Serial Performance

Moxa's 20-plus years of experience in serial board design is now concentrated in a new high performance serial data transmission chip. The Turbo Serial Engine™ chip provides serial boards with a 128-byte

FIFO, on-chip hardware and software flow control, and burst data mode. Thanks to the Turbo Serial Engine™, Moxa is able to offer the world's best performing smart serial boards.

### Drivers Provided for Windows, Linux, and Unix

Moxa continues to support a wide variety of operating systems, and the CP-104EL board is no exception. Reliable Windows COM and

Linux/Unix TTY drivers are provided for all Moxa boards, and other operating systems, such as WEPOS, are also supported for embedded integration.

### Specifications

#### Hardware

**Comm. Controller:** MU860 (16C550C compatible)

**Bus:** PCI Express x1

**Connector:** DB44 female

#### Serial Interface

**Number of Ports:** 4

**Serial Standards:** RS-232

**Max. No. of Boards per PC:** 4

#### Serial Line Protection

**ESD Protection:** 15 KV on the board

#### Performance

**Baudrate:** 50 bps to 921.6 Kbps

#### Serial Communication Parameters

**Data Bits:** 5, 6, 7, 8

**Stop Bits:** 1, 1.5, 2

**Parity:** None, Even, Odd, Space, Mark

**Flow Control:** RTS/CTS, XON/XOFF

#### Serial Signals

**RS-232:** Tx/D, Rx/D, RTS, CTS, DTR, DSR, DCD, GND

#### Driver Support

**Operating Systems:** Windows (2000, XP/2003/Vista/2008 x86/x64), Windows CE 5.0/6.0, Windows XP Embedded, DOS, Linux 2.4, Linux 2.6 (x86/x64), FreeBSD 4/5, QNX 6, SCO Open Server 5/6, UnixWare 7

#### Physical Characteristics

**Dimensions:** 67.21 x 100 mm (2.65 x 3.94 in)

### Environmental Limits

**Operating Temperature:** 0 to 55°C (32 to 131°F)  
**Operating Humidity:** 5 to 95% RH  
**Storage Temperature:** -20 to 85°C (-4 to 185°F)

### Regulatory Approvals

**FCC:** Part 15 Class B  
**EMS:** EN55022, EN55024, EN61000-3-2, EN61000-3-3, EN61000-6-2, EN61000-6-4, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11

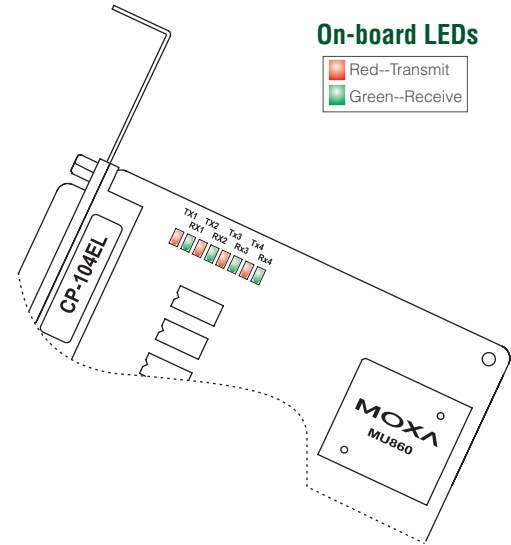
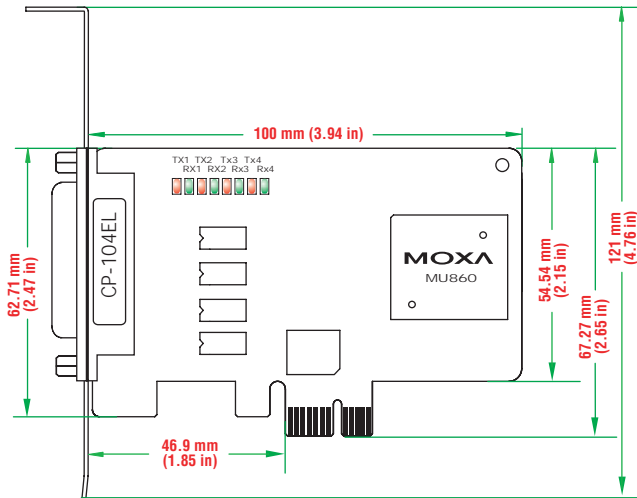
### Power Requirements

**Power Consumption:** 430 mA @ 3.3 V

### Warranty

**Warranty Period:** 5 years  
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

### Dimensions



### On-board LEDs

- Red--Transmit
- Green--Receive

## Ordering Information

### Available Models

**CP-104EL-DB9M:** 4-port RS-232 PCI low profile Express x1 serial board (includes DB9 male cable)  
**CP-104EL-DB25M:** 4-port RS-232 low profile PCI Express x1 serial board (includes DB25 male cable)

### Package Checklist

- CP-104EL board
- DB9-M or DB25-M connection cable
- Standard bracket and low profile bracket
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

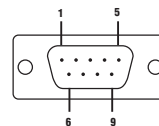
### Connection Options (can be purchased separately)

**CBL-M44M9x4-50**  
 DB44 male to DB9 male x 4 (50 cm cable)



PIN	RS-232	PIN	RS-232
1	DCD	5	GND
2	RxD	6	DSR
3	TxD	7	RTS
4	DTR	8	CTS

### DB9 male



**CBL-M44M25x4-50**  
 DB44 male to DB25 male x 4 (50 cm cable)



PIN	RS-232	PIN	RS-232
2	TxD	6	DSR
3	RxD	7	GND
4	RTS	8	DCD
5	CTS	20	DTR

### DB25 male

