

# CP-168EL-A

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



PCComm Lite

- > 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
- > Choose from a wide range of connection cables and boxes
- > Low profile form factor fits small-sized PCs
- > Drivers provided for a broad selection of operating systems, including the latest Windows and Linux



### Overview

The CP-168EL-A is a smart, 8-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 8 RS-232 serial ports supports a super fast 921.6 kbps baudrate. The CP-168EL-A 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-168EL-A 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.

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

Moxa continues to support a wide variety of operating systems, and the CP-168EL-A board is no exception. Reliable Windows and Linux/

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

### Specifications

#### Hardware

**Comm. Controller:** 16C550C compatible  
**Bus:** PCI Express x1  
**Connector:** VHDCI 68

#### Serial Interface

**Number of Ports:** 8  
**Serial Standards:** RS-232  
**Max. No. of Boards per PC:** 4

#### 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

#### Physical Characteristics

**Dimensions:** 64.42 x 102 mm (2.54 x 4.02 in)

#### Driver Support

**Windows:** Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), DOS

**Linux:** Linux 2.4.x, 2.6.x, 3.x

**Unix-like Systems:** QNX 6, SCO OpenServer, UnixWare 7, Solaris 10

**Note:** Please refer to Moxa's website for the latest driver support information.

#### Environmental Limits

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

#### Standards and Certifications

**EMC:** EN 55032/24  
**EMI:** CISPR 32, FCC Part 15B Class B  
**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  
 IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m  
 IEC 61000-4-8 PFMF  
 IEC 61000-4-11

#### MTBF (mean time between failures)

**Time:** 2,351,336 hrs  
**Standard:** Telcordia (Bellcore) TR/SR

#### Power Requirements

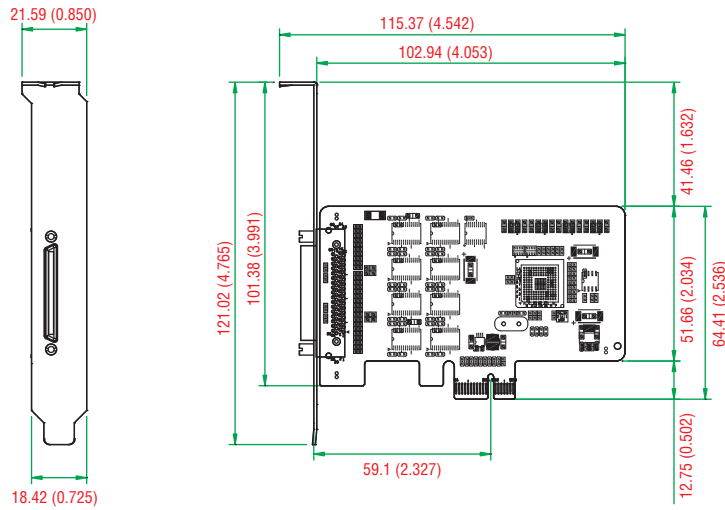
**Input Current:** 1,225 mA @ 3.3 VDC

#### Warranty

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

### Dimensions

Unit: mm (inch)



### Ordering Information

#### Available Models

**CP-168EL-A:** 8-port RS-232 low profile PCI Express x1 serial board

**Connection Options** (can be purchased separately)

**Low Profile Bracket:** Bracket for VHDCI connector (1490000008000)

**CBL-M68M9x8-100:** SCSI VHDCI 68 to 8 x DB9-M cable, 100 cm

**CBL-M68M25x8-100:** SCSI VHDCI 68 to 8 x DB25-M cable, 100 cm

**Optional Connectors** (choose one per board)

**OPT8-M9+:** VHDCI 68 to 8 x DB9-M connection box

**OPT8B+:** VHDCI 68 to 8 x DB25-M connection box

**OPT8A+:** VHDCI 68 to 8 x DB25-F connection box

**OPT8-RJ45+:** VHDCI 68 to 8 x RJ45 (8-pin) connection box

**OPT8S+:** VHDCI 68 to 8 x DB25-F connection box w/ surge protection

#### Package Checklist

- 1 CP-168EL-A board
- Low profile bracket
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

#### OPT8-M9+

DB9 male x 8 (150 cm cable)



#### CBL-M68M9x8-100

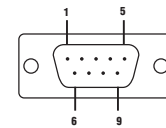
DB9 male x 8 (100 cm cable)



PIN	RS-232
1	DCD
2	RxD
3	TxD
4	DTR

PIN	RS-232
5	GND
6	DSR
7	RTS
8	CTS

#### DB9 male



#### OPT8B+

DB25 male x 8 (150 cm cable)



#### CBL-M68M25x8-100

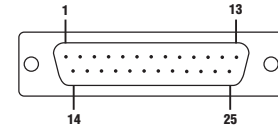
DB25 male x 8 (100 cm cable)



PIN	RS-232
2	TxD
3	RxD
4	RTS
5	CTS

PIN	RS-232
6	DSR
7	GND
8	DCD
20	DTR

#### DB25 male



#### OPT8A+

DB25 female x 8, 150 cm cable



#### OPT8S+

DB25 female x 8 (150 cm cable)



PIN	RS-232
2	RxD
3	TxD
4	CTS
5	RTS

PIN	RS-232
6	DTR
7	GND
8	DCD
20	DSR

#### DB25 female

