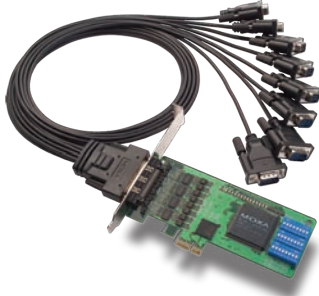# CP-118EL

8-port RS-232/422/485 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
> Choose from a wide range of connection cables and boxes
> Low profile form factor fits small-sized PCs
> Drivers provided for Windows (2000, XP/2003/Vista/2008 x86/x64), Windows CE 5.0, Windows XP Embedded, DOS, Linux 2.4, Linux 2.6 (x86/x64), FreeBSD 4/5, QNX 6, SCO Open Server 5/6, UnixWare 7
> 15 KV ESD protection on the board

Overview

The CP-118EL 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 serial ports can be configured independently for RS-232, RS-422, or RS-485 (either 2-wire or 4-wire), and the ports supports a super fast 921.6 Kbps baudrate. The CP-118EL 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-118EL 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-118EL 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: VHDCI 68

Serial Interface

Number of Ports: 8
Serial Standards: RS-232/422/485
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: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422: TxD+(B), TxD-(A), RxD+(B), RxD-(A), GND
RS-485-4w: TxD+(B), TxD-(A), RxD+(B), RxD-(A), GND
RS-485-2w: Data+(B), Data-(A), GND

Driver Support

Operating Systems: Windows (2000, XP/2003/Vista/2008 x86/x64), Windows CE 5.0, 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 132 mm (2.65 x 5.20 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, 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
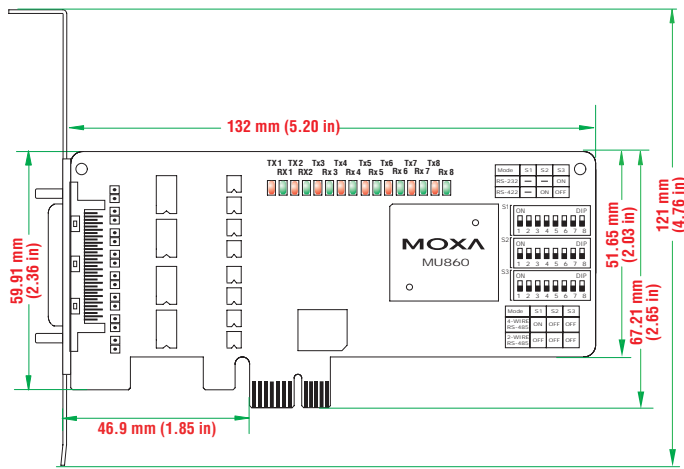
Power Requirements
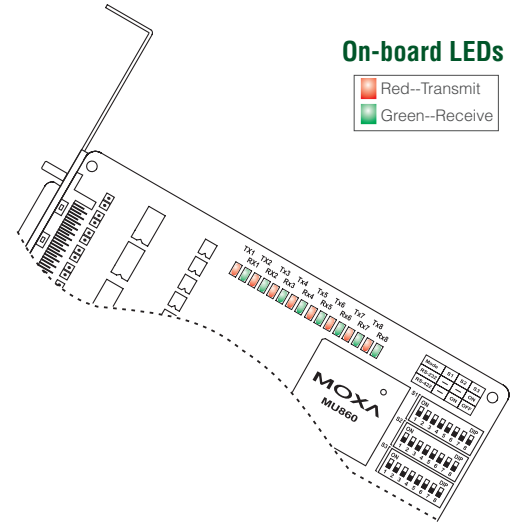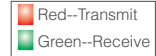
Power Consumption: 860 mA @ 3.3 V

Warranty

Warranty Period: 5 years
Details: See www.moxa.com/warranty

MOXA®

Dimensions

On-board LEDs
- Red--Transmit
- Green--Receive

132 mm (5.20 in)
59.91 mm (2.36 in)
46.9 mm (1.85 in)
51.65 mm (2.03 in)
67.21 mm (2.65 in)
121 mm (4.76 in)

Ordering Information

Available Models
CP-118EL: 8-port RS-232/422/485 low profile PCI Express x1 serial board

Package Checklist
- CP-118EL board
- Standard bracket and low profile bracket
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

Connection Options (can be purchased separately)
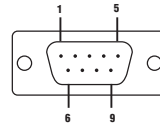
OPT8-M9+
DB9 male x 8 (150 cm cable)

CBL-M68M9x8-100 (OPT8D+)
DB9 male x 8 (100 cm cable)

PIN	RS-232	RS-422/RS-485-4w	RS-485-2w
1	DCD	TxD-(A)	---
2	RxD	TxD+(B)	---
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	---	---
7	RTS	---	---
8	CTS	---	---

DB9 male

OPT8B+
DB25 male x 8 (150 cm cable)

CBL-M68M25x8-100 (OPT8C+)
DB25 male x 8, (100 cm cable)

PIN	RS-232	RS-422/RS-485-4w	RS-485-2w
2	TxD	RxD+(B)	Data+(B)
3	RxD	TxD+(B)	---
4	RTS	---	---
5	CTS	---	---
6	DSR	---	---
7	GND	GND	GND
8	DCD	TxD-(A)	---
20	DTR	RxD-(A)	Data-(A)

DB25 male
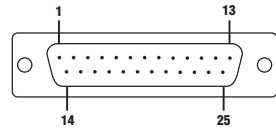
OPT8A+
DB25 female x 8 (150 cm cable)

OPT8S+
DB25 female x 8 (150 cm cable)
25 KV ESD Surge Protection

PIN	RS-232	RS-422/RS-485-4w	RS-485-2w
2	RxD	TxD+(B)	---
3	TxD	RxD+(B)	Data+(B)
4	CTS	---	---
5	RTS	---	---
6	DTR	RxD-(A)	Data-(A)
7	GND	GND	GND
8	DCD	TxD-(A)	---
20	DSR	---	---

DB25 female