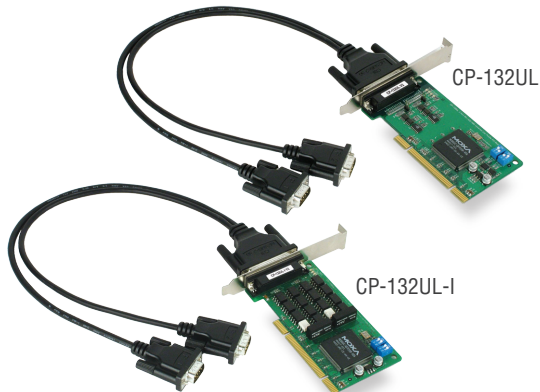


# CP-132UL/UL-I

## 2-port RS-422/485 Universal PCI serial boards with optional 2 KV isolation



- > Over 800 Kbps data throughput for top performance
- > 921.6 Kbps maximum baudrate for super fast data transmission
- > ADDC® provides automatic data direction control for RS-485 signals
- > Transmit data up to 1.2 km with RS-422/485
- > 128-byte FIFO and on-chip S/W flow control
- > Compatible with 3.3/5V PCI and PCI-X
- > Drivers provided for a broad selection of operating systems, including the latest Windows and Linux
- > 15 KV ESD protection on the board
- > MD1 low profile form factor fits small-sized PCs
- > Wide temperature model available for -40 to 85°C environments



### Overview

The CP-132UL and CP-132UL-I are 2-port Universal PCI boards designed for industrial automation applications that require a long distance, multi-point, PC-based data acquisition solution.

#### On-chip Automatic Data Direction Control for precise RS-485 communication

RS-485 communication requires precise timing control to enable and disable the line driver. Moxa's Turbo Serial Engine™ chip that powers the CP-132UL/UL-I boards comes with on-chip ADDC®, which makes

RS-485 as easy to use as RS-232.

#### RS-485 multidrop for up to 31 devices within 1.2 km

The CP-132UL/UL-I Universal PCI boards have two RS-422/485 serial ports, both of which can achieve data rates up to 921.6 Kbps. In RS-485 mode, the boards can connect up to 31 daisy-chained RS-485 devices within a range of 1.2 km. For long distance RS-485 communication, choose the CP-132UL-I model, which comes with 2 KV optical isolation protection to prevent equipment damage.

### Top Serial Performance

With 20-plus years of experience in serial board design, Moxa is now concentrating on a new high performance serial data transmission chip. The Turbo Serial Engine™ chip provides serial boards with a 128-

byte FIFO, on-chip 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-132UL/UL-I boards are 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:** 32-bit Universal PCI  
**Connector:** DB25 female

#### Serial Interface

**Number of Ports:** 2  
**Serial Standards:** RS-422/485  
**Max. No. of Boards per PC:** 4

#### Serial Line Protection

**ESD Protection:** 15 KV on the board  
**Optical Isolation:** 2 KV (CP-132UL-I only)

#### 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:** XON/XOFF  
**I/O Address:** Assigned by BIOS  
**IRQ:** Assigned by BIOS

### Serial Signals

**RS-422:** TxD+(B), TxD-(A), RxD+(B), RxD-(A), RTS+(B), RTS-(A), CTS+(B), CTS-(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 (2012 x64, 8/7/XP/2003/Vista/2008 x86/x64, 2000, 9X/ME/NT), Windows CE 5.0/6.0, Windows XP Embedded, DOS, Linux 2.4.x, Linux 2.6.x, FreeBSD 4/5, QNX 6, SCO OpenServer 5/6, UnixWare 7, Solaris 10 x86/x64

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

### Physical Characteristics

#### Dimensions:

CP-132UL: 64.4 x 120 mm (2.53 x 4.72 in)

CP-132UL-I: 64.4 x 120 mm (2.53 x 4.72 in)

### Environmental Limits

#### Operating Temperature:

Standard Models: 0 to 55°C (32 to 131°F)

Wide Temp. Models: -40 to 85°C (-40 to 185°F)

**Storage Temperature:** -40 to 85°C (-40 to 185°F)

**Ambient Relative Humidity:** 5 to 95% (non-condensing)

**Altitude:** Up to 2000 m

*Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.*

### Standards and Certifications

**EMC:** CE, FCC

**EMI:** EN 55022, FCC Part 15 Subpart B Class B

**EMS:** EN 55024, IEC 61000-4-2, IEC 61000-4-3

**Green Product:** RoHS, CRoHS, WEEE

**MTBF (mean time between failures)**

**Time:** 1,647,832 hrs

**Database:** Telcordia (Bellcore), GB

### Power Requirements

#### Power Consumption:

CP-132UL: 120 mA @ +5 V

CP-132UL-I: 490 mA @ +5 V

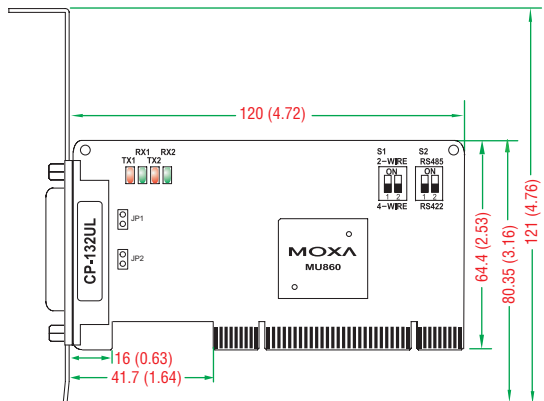
### Warranty

**Warranty Period:** 5 years

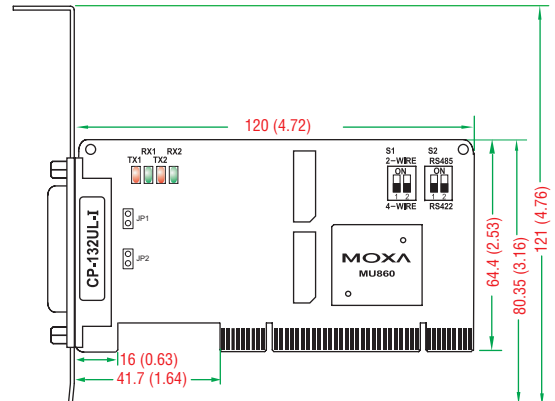
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

## Dimensions

CP-132UL



CP-132UL-I



## Ordering Information

### Available Models

**CP-132UL-DB9M:** 2-port RS-422/485 low profile Universal PCI serial board, 0 to 55°C operating temperature (includes DB9 male cable)

**CP-132UL-I-DB9M:** 2-port RS-422/485 low profile Universal PCI serial board with optical isolation, 0 to 55°C operating temperature (includes DB9 male cable)

**CP-132UL-T:** 2-port RS-422/485 low profile Universal PCI serial board, -40°C to 85 operating temperature

**CP-132UL-I-T:** 2-port RS-422/485 low profile Universal PCI serial board with optical isolation, -40°C to 85 operating temperature

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

### Package Checklist

- 1 CP-132UL or CP-132UL-I board
- Low profile bracket
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

### CBL-M25M9x2-50

DB25 male to DB9 male x 2 (50 cm cable)



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

### DB9 male

