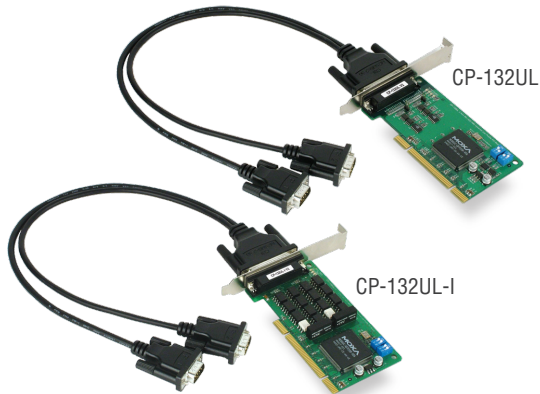


CP-132UL/UL-I

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 Windows (7 x86/x64, XP/2003/Vista/2008 x86/x64, 2000, 9X/ME/NT), 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, and UnixWare 7, Solaris 10 x86/x64
- > 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 9X/ME/NT/2000, Windows XP/2003/ Vista/2008/7 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, 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)

Standards and Certifications

EMC: CE, FCC
EMI: EN 55022, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class B
EMS: EN 55024, 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 (DIPS)
Green Product: RoHS, CRoHS, WEEE

MTBF (mean time between failures)

Time: 1,647,832 hrs
Database: Telcordia (Bellcore), GB

Power Requirements

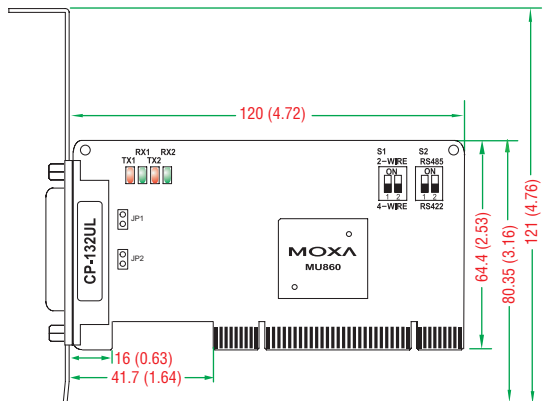
Power Consumption:
 CP-132UL: 120 mA @ +5 V
 CP-132UL-I: 490 mA @ +5 V

Warranty

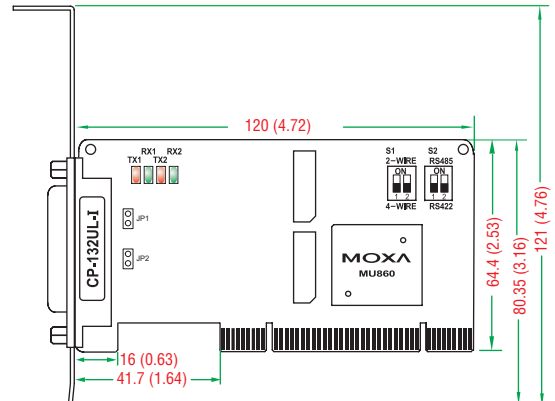
Warranty Period: 5 years
Details: See www.moxa.com/warranty

Dimensions

CP-132UL



CP-132UL-I



Unit: mm (inch)

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

