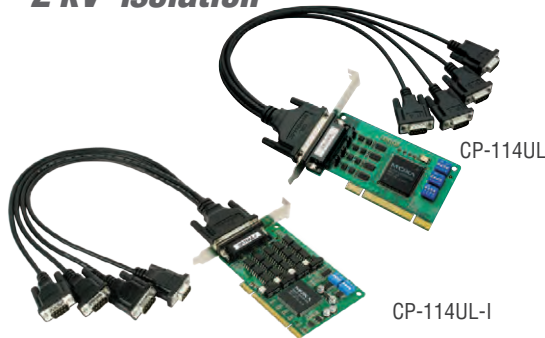


# CP-114UL/UL-I

**4-port RS-232/422/485 Universal PCI serial boards with optional 2 kV isolation**



- > Over 700 kbps data throughput for top performance
- > 128-byte FIFO and on-chip H/W, S/W flow control
- > Universal PCI compatible with 3.3/5 V PCI and PCI-X
- > Serial communication speed up to 921.6 kbps
- > Drivers provided for a broad selection of operating systems, including the latest Windows and Linux
- > Easy maintenance with on-board LED display
- > On-board 15 kV ESD and 2 kV electrical isolation
- > Wide temperature model available for -40 to 85°C environments



## Overview

Moxa's CP-114UL/UL-I series of multiport serial boards are designed to be used by industrial automation system integrators for long distance, multi-point, PC-based data acquisition applications. On-chip Automatic Data Direction Control for precision RS-485 communication requires precise timing control to enable and disable the line driver. The Moxa Turbo Serial Engine™ chip that powers the CP-114UL/UL-I

boards come with on-chip ADDC®, which makes RS-485 as easy to use as RS-232. In RS-485 mode, the serial port can connect up to 31 daisy-chained RS-485 devices within a range of 1.2 km. For long distance RS-485 communication, 2 kV electrical isolation protections are available to prevent equipment damage.

## Drives Provided for Windows, Linux, and Unix

Moxa continues to support a wide variety of operating systems, and the CP-114UL/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:** DB44 female

### Serial Interface

**Number of Ports:** 4  
**Serial Standards:** RS-232/422/485  
**Max. No. of Boards per PC:** 4  
**ESD Protection:** 15 kV on the board  
**Electrical Isolation:** 2 kV (CP-114UL-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:** RTS/CTS, XON/XOFF  
**I/O Address:** Assigned by BIOS  
**IRQ:** Assigned by BIOS

### 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

### Operating Systems

**Windows Real COM Drivers:** Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), DOS, Windows Embedded CE 5.0/6.0, Windows XP Embedded

**Fixed TTY Drivers:** QNX 6, SCO OpenServer, UnixWare 7, Solaris 10, FreeBSD

**Linux Real TTY Drivers:** Linux 2.4.x, 2.6.x

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

### Physical Characteristics

#### Dimensions:

CP-114UL: 64.4 x 120 mm (2.53 x 4.72 in)  
 CP-114UL-I: 64.4 x 130 mm (2.53 x 5.12 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: 114,223 hrs  
 Database: Telcordia (Bellcore), GB

**Power Requirements**

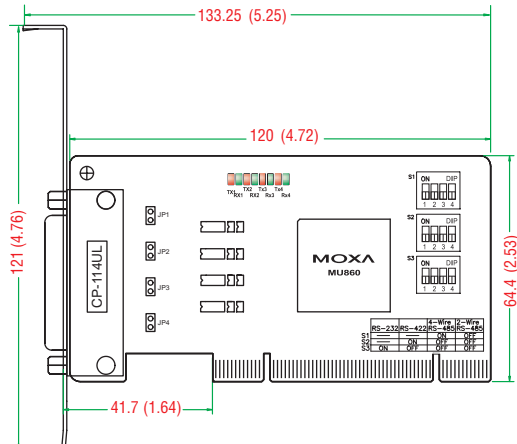
**Power Consumption:**  
 CP-114UL: 320 mA @ 5 VDC  
 CP-114UL-I: 465 mA @ 5 VDC

**Warranty**

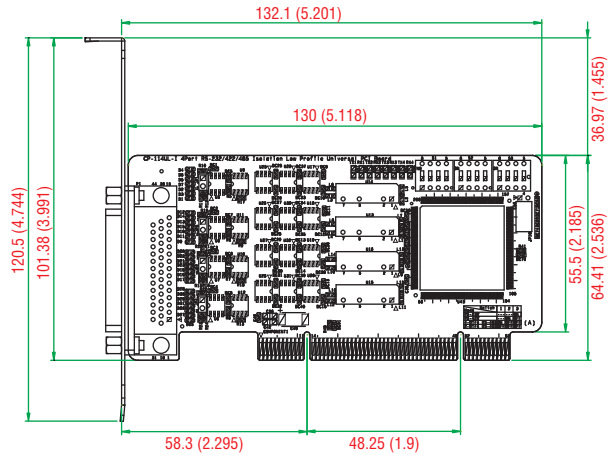
**Warranty Period:** 5 years  
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

**Dimensions**

**CP-114UL**



**CP-114UL-I**



Unit: mm (inch)

**Ordering Information**

**Available Models**

- CP-114UL:** 4-port RS-232/422/485 low profile Universal PCI board, 0 to 55°C operating temperature
- CP-114UL-DB9M:** 4-port RS-232/422/485 low profile Universal PCI serial board, 0 to 55°C operating temperature (includes DB9 male cable)
- CP-114UL-DB25M:** 4-port RS-232/422/485 low profile Universal PCI serial board, 0 to 55°C operating temperature (includes DB25 male cable)
- CP-114UL-I:** 4-port RS-232/422/485 low profile Universal PCI serial board with electrical isolation, 0 to 55°C operating temperature
- CP-114UL-I-DB9M:** 4-port RS-232/422/485 low profile Universal PCI serial board with electrical isolation, 0 to 55°C operating temperature (includes DB9 male cable)
- CP-114UL-I-DB25M:** 4-port RS-232/422/485 low profile Universal PCI serial board with electrical isolation, 0 to 55°C operating temperature (includes DB25 male cable)
- CP-114UL-T:** 4-port RS-232/422/485 low profile Universal PCI serial board, -40 to 85°C operating temperature
- CP-114UL-I-T:** 4-port RS-232/422/485 low profile Universal PCI serial board with electrical isolation, -40 to 85°C operating temperature

**Package Checklist**

- 1 CP-114UL or CP-114UL-I board
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

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

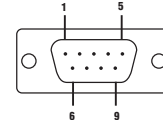
**CBL-M44M9x4-50**

DB44 male to DB9 male x 4 (50 cm cable)



PIN	RS-232	RS-422	RS-485-4w	RS-485-2w
1	DCD	TxD-(A)	TxD-(A)	-
2	RxD	TxD+(B)	TxD+(B)	-
3	TxD	RxD+(B)	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	RxD-(A)	Data-(A)
5	GND	GND	GND	GND
6	DSR	-	-	-
7	RTS	-	-	-
8	CTS	-	-	-
9	-	-	-	-

**DB9 male**



**CBL-M44M25x4-50**

DB44 male to DB25 male x 4 (50 cm cable)



PIN	RS-232	RS-422	RS-485-4w	RS-485-2w
2	TxD	RxD+(B)	RxD+(B)	Data+(B)
3	RxD	TxD+(B)	TxD+(B)	-
4	RTS	-	-	-
5	CTS	-	-	-
6	DSR	-	-	-
7	GND	GND	GND	GND
8	DCD	TxD-(A)	TxD-(A)	-
20	DTR	RxD-(A)	RxD-(A)	Data-(A)
22	-	-	-	-

**DB25 male**

