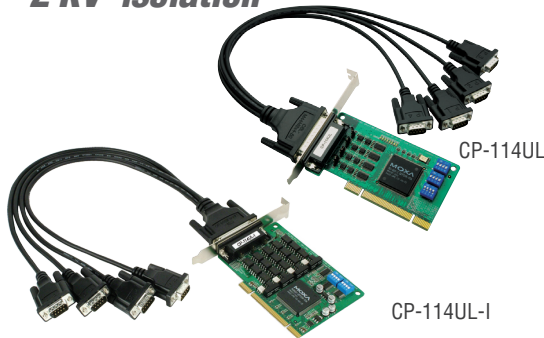


# CP-114UL/UL-I

## 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 Windows (7 x86/x64, XP/2003/Vista/2008 x86/x64, 2000, 9X/ME/NT), Linux 2.4, Linux 2.6 (x86/x64), Solaris 10 x86/x64
- > Easy maintenance with on-board LED display
- > On-board 15 KV ESD and 2 KV optical isolation protection
- > 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 optical 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

**Optical 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

#### Driver Support

**Operating Systems:** Windows 9X/ME/NT/2000, Windows XP/2003/Vista/2008/7 x86/x64, Linux 2.4, Linux 2.6 x86/x64, Solaris 10 x86/x64

*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)

#### 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:** 114,223 hrs

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

### Power Requirements

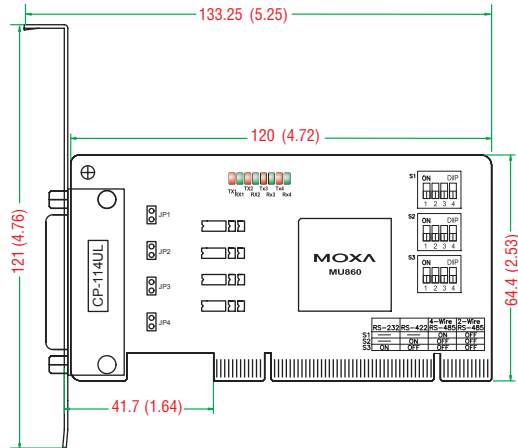
**Power Consumption:**  
 CP-114UL: 320 mA @ 5 VDC  
 CP-114UL-I: 465 mA @ 5 VDC

### Warranty

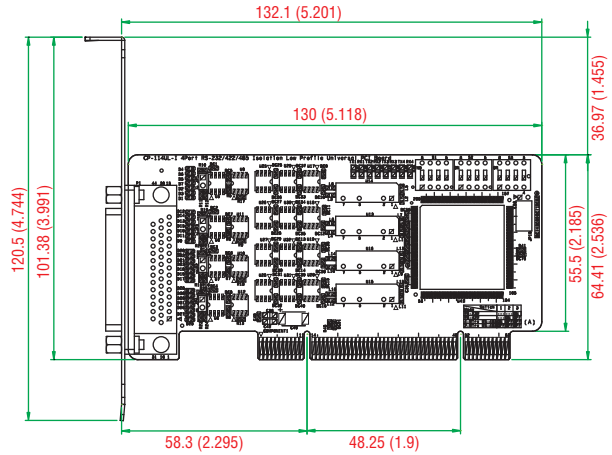
**Warranty Period:** 5 years  
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

### 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 optical isolation, 0 to 55°C operating temperature

**CP-114UL-I-DB9M:** 4-port RS-232/422/485 low profile Universal PCI serial board with optical 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 optical 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 optical isolation, -40 to 85°C operating temperature

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

### Package Checklist

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

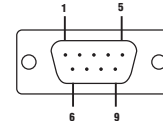
#### CBL-M44M9x4-50

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

