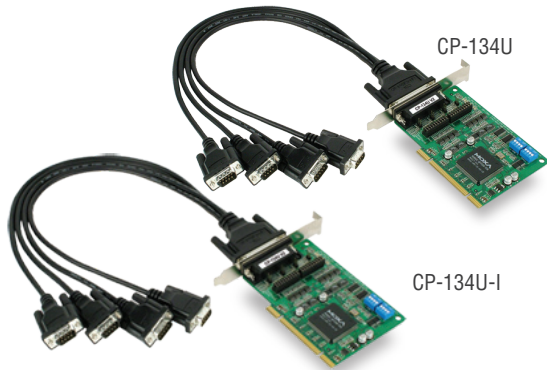# CP-134U/U-I

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

CP-134U

CP-134U-I

> Over 700 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
> 128-byte FIFO and on-chip H/W, S/W flow control
> Compatible with 3.3/5 V PCI and PCI-X
> Drivers provided for a broad selection of operating systems, including the latest Windows and Linux
> Added bonus! Ports 1 and 2 support RS-232 and RS-422/485
> Wide temperature model available for -40 to 85°C environments

PComm Lite   Extreme Performance Turbo Serial Engine   -40°C 85°C

Compatible with Windows 7   Designed for Microsoft Windows Vista Windows XP x64 Edition   RoHS   CE   FC

## Overview

The CP-134U and CP-134U-I 4-port universal PCI boards are designed for industrial automation applications that require a long distance, multipoint, 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. The Moxa Turbo Serial Engine™ chip that powers the CP-134U board 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-134U universal PCI board has 4 RS-422/485 serial ports, each of which can achieve data rates up to 921.6 kbps. In RS-485 mode, the board 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-134U-I, which comes with 2 kV electrical isolation protection to prevent equipment damage.

## Drivers Provided for Windows, Linux, and Unix

Moxa continues to support a wide variety of operating systems, and the CP-134U and CP-134U-I boards are no exception. Reliable

Windows and Linux/Unix 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:** 2 x RS-232/422/485, 2 x RS-422/485
**Max. No. of Boards per PC:** 4

### Serial Line Protection
**Electrical Isolation:** 2 kV (CP-134U-I configured for RS-422/485 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

### Serial Signals
**RS-232:** TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
**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

### Physical Characteristics
**Dimensions:**
CP-134U: 82.5 x 120 mm (3.24 x 4.72 in)
CP-134U-I: 115 x 120 mm (4.52 x 4.72 in)

### Driver Support
**Windows:** Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), DOS, Windows Embedded CE 5.0/6.0, Windows XP Embedded
**Linux:** Linux 2.4.x, 2.6.x, 3.x
**Unix-like Systems:** QNX 6, SCO OpenServer, UnixWare 7, Solaris 10, FreeBSD
Note: Please refer to Moxa's website for the latest driver support information.

### 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:** EN 55022/24
**EMI:** CISPR 22, FCC Part 15B Class B
**EMS:**
IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV
IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m
### MTBF (mean time between failures)
**Time:** 480,209 hrs
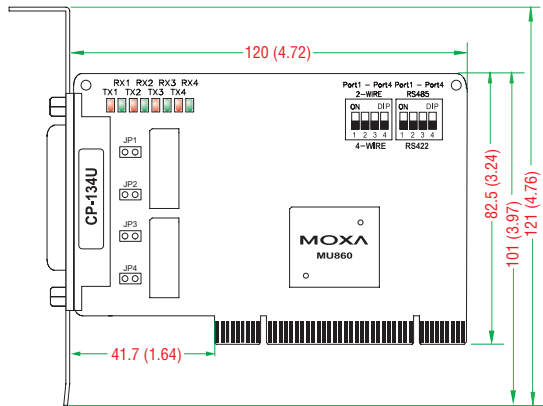**Standard:** Telcordia (Bellcore) TR/SR

## Power Requirements
**Input Current:**
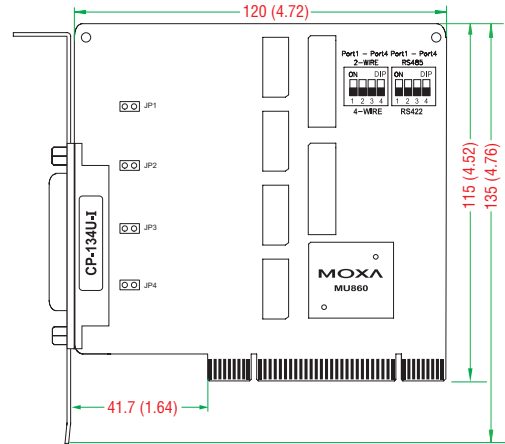CP-134U: 180 mA @ 5 VDC
CP-134U-I: 850 mA @ 5 VDC
### Warranty
**Warranty Period:** 5 years
**Details:** See www.moxa.com/warranty

## Dimensions

Unit: mm (inch)

### CP-134U



### CP-134U-I



## : Ordering Information

### Available Models
**CP-134U:** 4-port RS-422/485 Universal PCI serial board, 0 to 55°C operating temperature
**CP-134U-DB9M:** 4-port RS-422/485 Universal PCI serial board, 0 to 55°C operating temperature (CBL-M44M9x4-50 cable included)
**CP-134U-DB25M:** 4-port RS-422/485 Universal PCI serial board, 0 to 55°C operating temperature (CBL-M44M25x4-50 cable included)
**CP-134U-I:** 4-port RS-422/485 Universal PCI serial board with electrical isolation, 0 to 55°C operating temperature
**CP-134U-I-DB9M:** 4-port RS-422/485 Universal PCI serial board with electrical isolation, 0 to 55°C operating temperature (CBL-M44M9x4-50 cable included)
**CP-134U-I-DB25M:** 4-port RS-422/485 Universal PCI serial board with electrical isolation, 0 to 55°C operating temperature (CBL-M44M25x4-50 cable included)
**CP-134U-T:** 4-port RS-422/485 Universal PCI serial board, -40 to 85°C operating temperature
**CP-134U-I-T:** 4-port RS-422/485 Universal PCI serial board with electrical isolation, -40 to 85°C operating temperature

### Connection Options (can be purchased separately)
**Low Profile Bracket:** Bracket for DB44 connector (1490000001000)
**CBL-M44M9x4-50:** M44 to 4 x DB9-M cable, 50 cm
**CBL-M44M25x4-50:** M44 to 4 x DB25-M cable, 50 cm

### Package Checklist
- 1 CP-134U or CP-134U-I board
- 1 connection cable (optional)
- Documentation and software CD
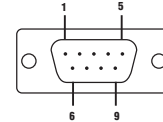- Quick installation guide (printed)
- Warranty card

### 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 | RTS-(A) | – | – |
| 7 | RTS | RTS+(B) | – | – |
| 8 | CTS | CTS+(B) | – | – |
| 9 | – | CTS-(A) | – | – |

**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 | RTS+(B) | – | – |
| 5 | CTS | CTS+(B) | – | – |
| 6 | DSR | RTS-(A) | – | – |
| 7 | GND | GND | GND | GND |
| 8 | DCD | TxD-(A) | TxD-(A) | – |
| 20 | DTR | RxD-(A) | RxD-(A) | Data-(A) |
| 22 | – | CTS-(A) | – | – |

**DB25 male**