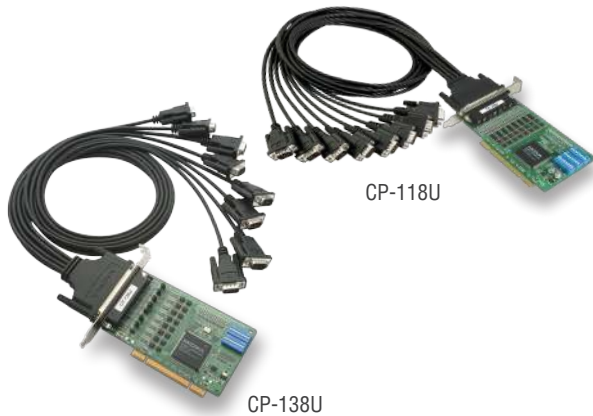# CP-118U/138U

## 8-port RS-232/422/485 Universal PCI serial boards

CP-118U

CP-138U

> Over 700 kbps data throughput for top performance
> 921.6 kbps maximum baudrate for super fast data transmission
> 128-byte FIFO and on-chip H/W, 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
> Easy maintenance with on-board LED display, and management software
> 15 kV ESD protection on the board
> Wide temperature model available for -40 to 85°C environments

*PComm* Lite | Extreme Performance | -40°C 85°C

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

## Overview

The CP-118U and CP-138U are smart, 8-port Universal PCI serial boards designed for POS and ATM applications and for use by industrial automation system manufacturers and system integrators. Both boards are compatible with all major operating systems. In addition, the CP-118U's 8 RS-232/422/485 ports and the CP-138U's 8 RS-422/485 ports support data rates up to 921.6 kbps, and provide full modem control signals to ensure compatibility with a wide range of serial peripherals. The CP-118U and CP-138U support both 3.3V and 5V PCI buses, making them suitable for installation in most PC servers.

## Drivers Provided for Windows and Linux

One of Moxa's highest priorities is to provide drivers for all mainstream operating systems. Reliable, well-tested Windows COM and Linux/Unix TTY drivers are available for use with the CP-118U and CP-138U serial boards. Other operating systems, such as Windows XP embedded and WEPOS, are also supported to accommodate embedded integration applications.

## Specifications

### Hardware
**Comm. Controller:** MU860 (16C550C compatible)
**Bus:** 32-bit Universal PCI
**Connector:** DB62 female

### Serial Interface
**Number of Ports:** 8
**Serial Standards:**
CP-118U: RS-232/422/485
CP-138U: RS-422/485
**Max. No. of Boards per PC:** 4

### Serial Line Protection
**ESD Protection:** 15 kV on the board

### 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:** 82 x 135 mm (3.22 x 5.31 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:** 1,147,210 hrs
**Database:** Telcordia (Bellcore), GB
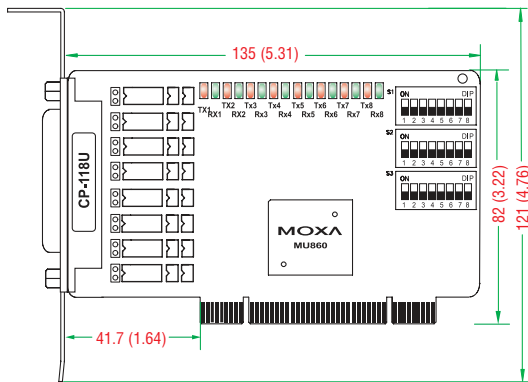
**Power Requirements**
**Power Consumption:**
CP-118U: 240 mA @ +5 V (RS-232), 300 mA @ +5 V (RS-422)
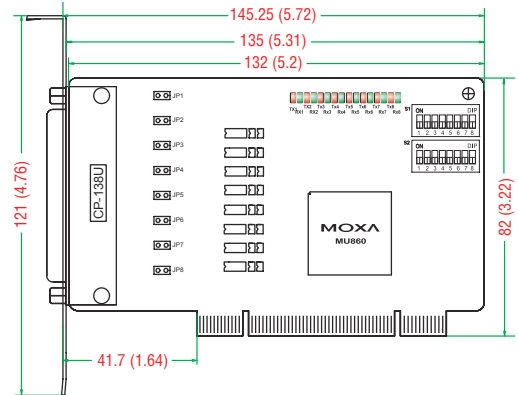CP-138U: 135 mA @ +5V (RS-422)

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

## Dimensions

### CP-118U

### CP-138U

Unit: mm (inch)



## : Ordering Information

### Available Models

**CP-118U:** 8-port RS-232/422/485 Universal PCI serial board, 0 to 55°C operating temperature
**CP-138U:** 8-port RS-422/485 Universal PCI serial board, 0 to 55°C operating temperature
**CP-118U-T:** 8-port RS-232/422/485 Universal PCI serial board, -40 to 85°C operating temperature
**CP-138U-T:** 8-port RS-422/485 Universal PCI serial board, -40 to 85°C operating temperature

### Package Checklist

- 1 CP-118U or CP-138U board
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

### Connection Options (can be purchased separately)

**OPT8-M9**
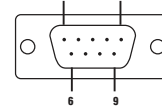DB9 male x 8 (150 cm cable)

**CBL-M62M9x8-100 (OPT8D)**
DB9 male x 8 (100 cm cable)

| PIN | RS-232 | PIN | RS-232 |
|-----|--------|-----|--------|
| 1 | DCD | 5 | GND |
| 2 | RxD | 6 | DSR |
| 3 | TxD | 7 | RTS |
| 4 | DTR | 8 | CTS |

**DB9 male**



**OPT8B**
DB25 male x 8 (150 cm cable)

**CBL-M62M25x8-100 (OPT8C)**
DB25 male x 8 (100 cm cable)

| PIN | RS-232 | PIN | RS-232 |
|-----|--------|-----|--------|
| 2 | TxD | 6 | DSR |
| 3 | RxD | 7 | GND |
| 4 | RTS | 8 | DCD |
| 5 | CTS | 20 | DTR |

**DB25 male**
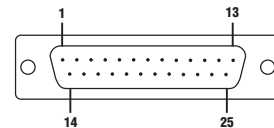


**OPT8A**
DB25 female x 8 (150 cm cable)

**OPT8S**
DB25 female x 8 (150 cm cable)
25 kV ESD Surge Protection

| PIN | RS-232 | PIN | RS-232 |
|-----|--------|-----|--------|
| 2 | RxD | 6 | DTR |
| 3 | TxD | 7 | GND |
| 4 | CTS | 8 | DCD |
| 5 | RTS | 20 | DSR |

**DB25 female**
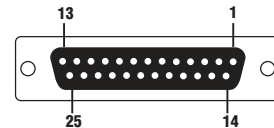


**OPT8-RJ45**
8-pin RJ45 x 8 (30 cm cable)

| PIN | RS-232 | PIN | RS-232 |
|-----|--------|-----|--------|
| 1 | DSR | 5 | RxD |
| 2 | RTS | 6 | DCD |
| 3 | GND | 7 | CTS |
| 4 | TxD | 8 | DTR |

**8-pin RJ45**