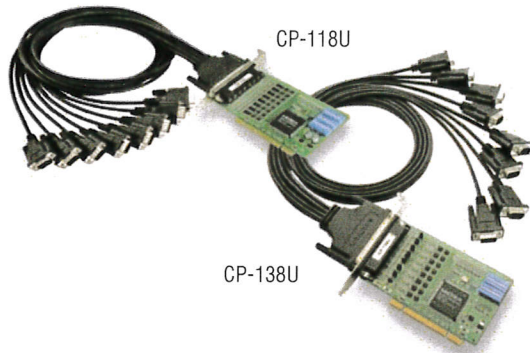


# CP-118U/138U

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



- > 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 Windows (Vista, 2003, XP, 2000, 98, ME), WinCE 5.0, Linux, and Unix
- > Easy maintenance with on-board LED display, and management software
- > 15 KV ESD protection on the board

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa's website for details.



### 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, Linux, and Unix

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. 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

**Number of Boards:** 4 per PC (max.)

#### 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

#### Driver Support

**Operating Systems:** CP-118U: Windows (2000, XP/2003/Vista x86/x64, 9X/ME/NT), Windows CE 5.0, Windows XP Embedded, DOS, Linux 2.4/2.6, FreeBSD 4/5, QNX 6 (CP-118U only: SCO Open Server 5/6, UnixWare 7)

#### Physical Characteristics

**Dimensions:** 82 x 135 mm (3.22 x 5.31 in)

#### Environmental Limits

**Operating Temperature:** 0 to 55°C (32 to 131°F)

**Operating Humidity:** 5 to 95% RH

**Storage Temperature:** -20 to 85°C (-4 to 185°F)

**Regulatory Approvals:** EN55022, EN55024, EN61000-3-2, EN61000-3-3, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8, IEC61000-4-11, FCC Part 15 Class B

#### Power Requirements

##### Power Consumption:

CP-118U: 240 mA @ +5 V (RS-232), 300 mA @ +5 V (RS-422)

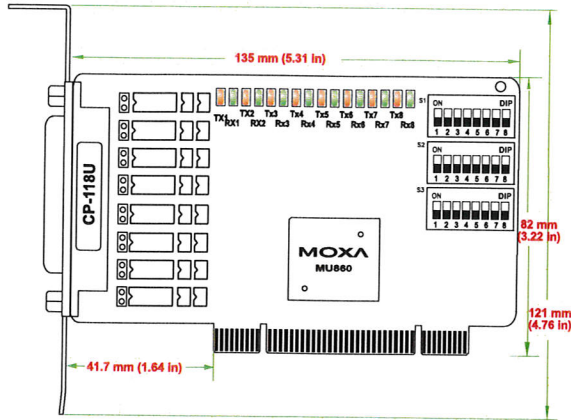
CP-138U: 135 mA @ +5V (RS-422)

#### Warranty

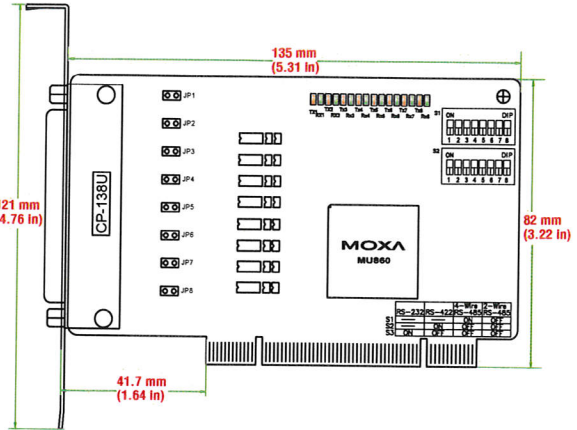
**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

**Dimensions**  
**CP-118U**



**CP-138U**



**Ordering Information**

**Available Models**

**CP-118U:** 8-port RS-232/422/485 Universal PCI board

**CP-138U:** 8-port RS-422/485 Universal PCI board

**Package Checklist**

- CP-118U or CP-138U board
- Standard bracket
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

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

**OPT8-M9**

DB9 male x 8 (150 cm cable)



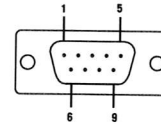
**CBL-M62M9x8-100 (OPT8D)**

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)



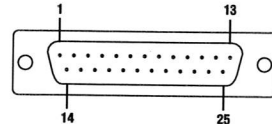
**CBL-M62M25x8-100 (OPT8C)**

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



**OPT8F/Z (RS-422)**

DB25 female x 8 (150 cm cable)  
110 or 230 VAC power adaptor  
(115.2 Kbps max. baudrate)



OPT8F with 500 V isolation

**OPT8K/OPT8I (RS-422/485)**

DB25 female x 8 (150 cm cable)  
110 or 230 VAC power adaptor



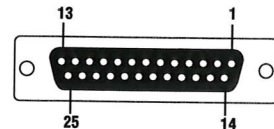
OPT8I with 2 KV isolation

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

| PIN | RS-422  |
|-----|---------|
| 2   | RxD+(B) |
| 3   | TxD+(B) |
| 7   | GND     |
| 14  | RxD-(A) |
| 16  | TxD-(A) |

| PIN | RS-422/RS-485-4w | RS-485-2w |
|-----|------------------|-----------|
| 2   | RxD+(B)          | Data+(B)  |
| 3   | TxD+(B)          |           |
| 7   | GND              | GND       |
| 14  | RxD-(A)          | Data-(A)  |
| 16  | TxD-(A)          |           |

**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**

