# **CP-168U**

# 8-port RS-232 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
- > Choose from a wide range of connection cables and boxes
- > Compatible with 3.3/5V PCI and PCI-X
- > Drivers provided for Windows (7 x86/x64, XP/2003/Vista/2008 x86/x64, 2000, 9X/ME/NT), Windows CE 5.0/6.0, Windows XP Embedded, DOS, Linux 2.4, Linux 2.6 (x86/x64), FreeBSD 4/5, QNX 6, SCO Open Server 5/6, UnixWare 7, Solaris 10 x86/x64
- > 15 KV ESD protection on the board
- > Wide temperature model available for -40 to 85°C environments





















# : Introduction

The CP-168U is a smart, 8-port universal PCI board designed for POS and ATM applications. It is a top choice of industrial automation engineers and system integrators, and supports many different operating systems, including Windows, Linux, and even Unix. In addition, each of the board's 8 RS-232 serial ports supports a super

fast 921.6 Kbps baudrate. The CP-168U provides full modem control signals to ensure compatibility with a wide range of serial peripherals, and works with both 3.3V and 5V PCI buses, allowing the board to be installed in virtually any available PC server.

# **Specifications**

### Hardware

Comm. Controller: MU860 (16C550C compatible)

Bus: 32-bit Universal PCI Connector: DB62 female Serial Interface **Number of Ports: 8** Serial Standards: RS-232 Max. No. of Boards per PC: 4 **Serial Line Protection** ESD Protection: 15 KV on the board

Optical Isolation: 500 V with connection box Opt8F (must be

purchased separately) **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

**Driver Support** 

Operating Systems: Windows 9X/ME/NT/2000, Windows XP/2003/ Vista/2008/7 x86/x64, Windows CE 5.0/6.0, Windows XP Embedded, DOS, Linux 2.4, Linux 2.6 x86/x64, FreeBSD 4/5, QNX 6, SCO Open

Server 5/6, UnixWare 7, Solaris 10 x86/x64

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

**Physical Characteristics** 

**Dimensions:** 82 x 120 mm (3.22 x 4.72 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

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: 280,854 hrs

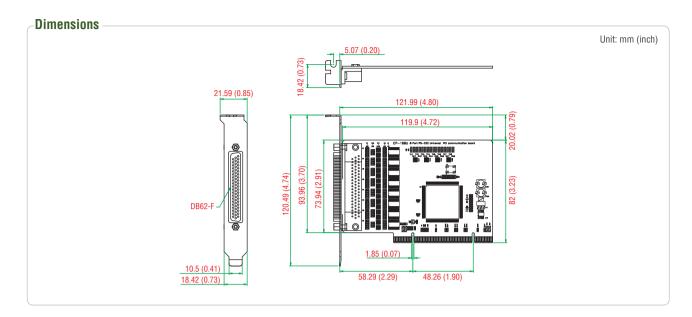
Database: Telcordia (Bellcore), GB **Power Requirements** 

Power Consumption: 180 mA @ +5 V

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty



# **Ordering Information**

# **Available Models**

CP-168U: 8-port RS-232 Universal PCI serial board, 0 to 55°C operating temperature CP-168U-T: 8-port RS-232 Universal PCI serial board, -40 to 85°C operating temperature

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

# **Package Checklist** 1 CP-168U board

- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

# **OPT8-M9**

DB9 male x 8 (150 cm cable)



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



| PIN | RS-232 |
|-----|--------|
| 1   | DCD    |
| 2   | RxD    |
| 3   | TxD    |
| 4   | DTR    |

| PIN | RS-232 |
|-----|--------|
| 5   | GND    |
| 6   | DSR    |
| 7   | RTS    |
| 8   | CTS    |
|     |        |



# OPT8B

DB25 male x 8 (150 cm cable)



# CBL-M62M25x8-100 (OPT8C)

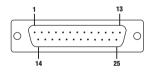
DB25 male x 8 (100 cm cable)



| PIN | RS-232 |
|-----|--------|
| 2   | TxD    |
| 3   | RxD    |
| 4   | RTS    |
| 5   | CTS    |

| PIN | RS-232 |
|-----|--------|
| 6   | DSR    |
| 7   | GND    |
| 8   | DCD    |
| 20  | DTR    |

# DB25 male



DB25 female x 8 (150 cm cable)

110 or 230 VAC power adaptor

OPT8K(RS-422/485)

### OPT8A

DB25 female x 8 (150 cm cable)



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

### **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 Kbns max. baudrate)



OPT8F with 500 V isolation

| 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)          |           |

| 2  | RxD+(B) | Data+(B) |
|----|---------|----------|
| 3  | TxD+(B) |          |
| 7  | GND     | GND      |
| 14 | RxD-(A) | Data-(A) |
| 16 | TxD-(A) |          |
|    |         |          |

# **OPT8-RJ45**

8-pin RJ45 x 8 (30 cm cable)



| PIN | RS-232 | PII |
|-----|--------|-----|
| 1   | DSR    | 5   |
| 2   | RTS    | 6   |
| 3   | GND    | 7   |
| 4   | TxD    | 8   |

| PIN | RS-232 |  |
|-----|--------|--|
| 5   | RxD    |  |
| 6   | DCD    |  |
| 7   | CTS    |  |
| 8   | DTR    |  |

8-pin RJ45

**DB25** female

