Multiport Serial Boards

CP-118U-I/138U-I
8-port RS-232/422/485 Universal PCI serial boards with 2 KV isolation

The CP-118U-I and CP-138U-I are 8-port serial boards designed for long distance, multi-point, PC-based data acquisition applications. Industrial automation system integrators will be eager to use these boards for many of their industrial automation projects.

On-chip ADDC® for precise RS-485 communication
RS-485 communication requires precise timing control to enable and disable the line driver, and the Moxa Turbo Serial Engine™ chip that powers the CP-118U-I and CP-138U-I boards come with on-chip ADDC® (automatic data direction control) to make RS-485 as easy to use as RS-232.

RS-485 multidrop for up to 31 devices within 1.2 km
The CP-118U-I’s 8 RS-232/422/485 ports and the CP-138U-I’s 8 RS-422/485 ports can achieve data rates up to 921.6 Kbps, and in RS-485 mode, one serial port can connect up to 31 daisy-chained RS-485 devices within a range of 1.2 km. In addition, the 2 KV optical isolation protection on the CP-118U-I and CP-138U-I boards helps prevent equipment damage for long distance RS-485 communication.

Top Serial Performance
With 20-plus years of experience in serial board design, Moxa is now concentrating on a new high performance serial data transmission chip. The Turbo Serial Engine™ chip provides serial boards with a 128-byte FIFO, on-chip hardware and software flow control, and burst data mode. Thanks to the Turbo Serial Engine™, Moxa is able to offer the world’s best performing smart serial boards.

Drivers Provided for Windows, Linux, and Unix
Moxa continues to support a wide variety of operating systems, and the CP-118U-I and CP-138U-I boards are no exception. Reliable Windows COM and Linux/Unix TTY drivers are provided for most Moxa boards, and other operating systems, such as WEPOS, are also supported for embedded integration.

Specifications

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Comm. Controller: MU860 (16C550C compatible)</th>
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</thead>
<tbody>
<tr>
<td>Bus:</td>
<td>32-bit Universal PCI</td>
</tr>
<tr>
<td>Connector:</td>
<td>DB78 female</td>
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<tr>
<td>Serial Interface</td>
<td></td>
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<tr>
<td>Number of Ports:</td>
<td>8</td>
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<tr>
<td>Max. No. of Boards per PC:</td>
<td>4</td>
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<tr>
<td>Serial Line Protection</td>
<td>ESD Protection: 15 KV on the board, Optical Isolation: 2 KV</td>
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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 (2012 x64, 8/7/XP/2003/Vista/2008 x86/x64, 2000, 9X/ME/NT), Windows CE 5.0/6.0, Windows XP Embedded, DOS, Linux 2.4.x, Linux 2.6.x, FreeBSD 4/5, QNX 6, SCO OpenServer 5/6, UnixWare 7, Solaris 10 x86/x64
Note: Please refer to Moxa's website for the latest driver support information.

**Physical Characteristics**
Dimensions: 105 x 133 mm (4.13 x 5.23 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.

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

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

**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, CrHiS, WEEE
- **MTBF**: (mean time between failures) Time: 1,147,210 hrs

**Power Requirements**
- **Power Consumption**:
  - CP-118U-I: 860 mA @ +5 V
  - CP-138U-I: 330 mA @ +5V

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

**Dimensions**

**Ordering Information**

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