

CP-118U-I/138U-I

8-port RS-232/422/485 Universal PCI serial boards with 2 KV isolation



- > 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 (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
- > Easy maintenance with on-board LED display, and management software
- > 15 KV ESD protection and 2 KV optical isolation on the board
- > Wide temperature model available for -40 to 85°C environments



Overview

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

Hardware

Comm. Controller: MU860 (16C550C compatible)

Bus: 32-bit Universal PCI

Connector: DB78 female

Serial Interface

Number of Ports: 8

Serial Standards:

CP-118U-I: RS-232/422/485

CP-138U-I: RS-422/485

Max. No. of Boards per PC: 4

Serial Line Protection

ESD Protection: 15 KV on the board

Optical Isolation: 2 KV

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 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: 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)

Standards and Certifications

EMC: CE, FCC

EMI: EN 55022, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class 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: 1,147,210 hrs

Database: Telcordia (Bellcore), GB

Power Requirements

Power Consumption:

CP-118U-I: 860 mA @ +5 V

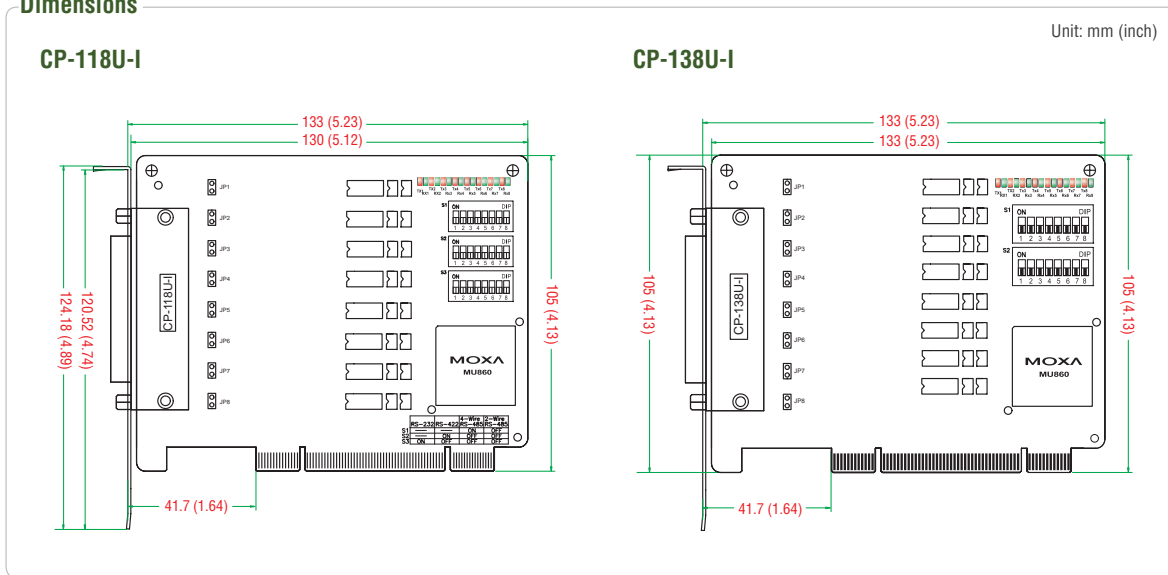
CP-138U-I: 330 mA @ +5V

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions



Ordering Information

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: 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-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)

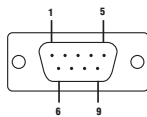
Package Checklist

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

CBL-M78M9x8-100



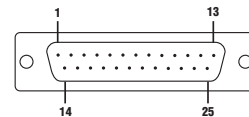
DB9 male



CBL-M78M25x8-100



DB25 male



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