# CP-118U-I/CP-138U-I

# 8-port RS-232/422/485 Smart Universal PCI Serial Board w/ 2 KV Optical Isolation

# **Features**



- > 128-byte FIFO and on-chip H/W, S/W flow control
- Universal PCI compatible with 3.3/5V PCI and PCI-X
- Serial communication speed up to 921.6 Kbps
- Windows Vista/2003/XP/2000, and Linux driver support
- Easy maintenance with on-board LED display, and management
- On-board 15 KV ESD and 2 KV optical isolation protection





















# : Overview

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

## On-chip ADDC™ for Precision 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 card comes 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, the serial port can connect up to 31 daisy-chained RS-485 devices within a range of 1.2 km. For long distance RS-485 communication, 2 KV optical isolation protection is available to prevent equipment damage.

# **Specifications**

## **Hardware**

Connector: Female DB78

Comm. Controller: MU860 (16C550C compatible)

### Interface

Bus Interface: 32-bit Universal PCI Number of Ports: 8 (only one IRQ required)

Max No. of Boards: 4

## **Signals**

RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND (CP-118U-I only)

RS-422: TxD+(B), TxD-(A), RxD+(B), RxD-(A), GND 4-wire RS-485: TxD+(B), TxD-(A), RxD+(B), RxD-(A), GND

2-wire RS-485: Data+(B), Data-(A), GND

#### **Performance**

Baudrate: 50 bps to 921.6 Kbps

Configuration Data Bits: 5, 6, 7, 8 Stop Bit(s): 1, 1.5, 2

I/O address/IRQ: BIOS assigned Parity: None, Even, Odd, Space, Mark Flow Control: RTS/CTS. XON/XOFF

#### **Power and Environment**

#### **Power Requirement:**

CP-118U-I: 860 mA (+5V, RS-232) CP-138U-I: 330 mA (+5V, RS-422) Operating Temperature: 0 to 55°C Operating Humidity: 5 to 95% RH Storage Temperature: -20 to 85°C

ESD Protection: Embedded 15 KV ESD Protection

Optical Isolation: 2 KV **Regulatory Approvals** 

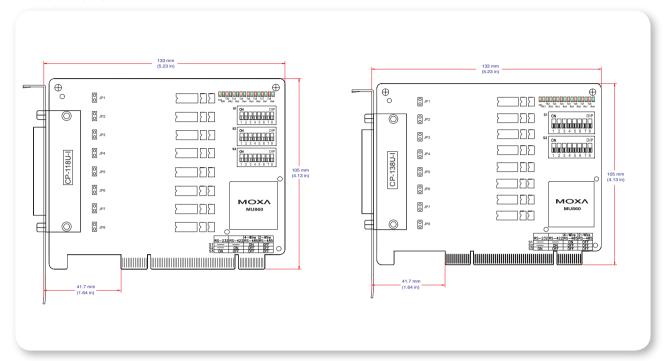
EN55022 Class B, EN55024, EN61000-3-2, EN61000-3-3,

FCC Part 15 Class B

Warranty: 5 years



# **Dimensions**



# **:** Ordering Information

**CP-118U-I:** 8-port RS-232/422/485 Universal PCI board with 2 KV Optical Isolation Protection **CP-138U-I:** 8-port RS-422/485 Universal PCI board with 2 KV Optical Isolation Protection

## **Optional Connectors (choose one per board)**

CBL-M78M9x8-100: 8-port male DB9 connection cable CBL-M78M25x8-100: 8-port male DB25 connection cable

## **Package Checklist**

- CP-118U-I or CP-138U-I board with standard bracket
- Document & Software CD-ROM
- Quick Installation Guide

# **:** Connection Options

## Male DB9

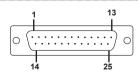


PIN	RS- 232	RS-422/4-wire RS-485	2-wire RS-485
1	DCD	TxD-(A)	
2	RxD	TxD+(B)	
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR		
7	RTS		
8	CTS		

# **CBL-M78M9x8-100**DB78 to Male DB9 x 8, 100 cm Cable



## Male DB25



PIN	RS- 232	RS-422/4-wire RS-485	2-wire RS-485
2	TxD	RxD+(B)	Data+(B)
3	RxD	TxD+(B)	
4	RTS		
5	CTS		
6	DSR		
7	GND	GND	GND
8	DCD	TxD-(A)	
20	DTR	RxD-(A)	Data-(A)
6 7 8	DSR GND DCD	GND TxD-(A)	 GND 

**CBL-M78M25x8-100**DB78 to Male DB25 x 8, 100 cm Cable

