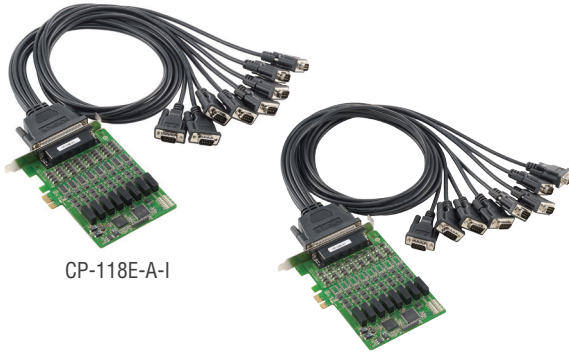# CP-118E-A-I/138E-A-I

8-port 3-in-1, RS-422/485 PCI Express board with 4 kV surge protection and 2 kV electrical isolation

CP-118E-A-I

CP-138E-A-I

> PCI Express x1 compliant
> Serial communication speed up to 921.6 kbps
> 128-byte FIFO and on-chip S/W flow control
> Variety of connection cables and boxes available for RS-232/422/485
> Drivers provided for the latest versions of Windows, Linux, and Unix
> Easy maintenance with on-board LED display and management software
> 15 kV ESD, 4 kV surge, and 2 kV electrical isolation onboard

Overview

The CP-118E-A-I and CP-138E-A-I are smart PCI Express multiport serial boards designed for POS and ATM applications, and for use by industrial automation system manufacturers and system integrators. The CP-118E-A-I and CP-138E-A-I are compatible with all popular operating systems, and each of their 8 serial ports supports data rates of up to 921.6 kbps, and provide full modem control signals, ensuring compatibility with a wide range of serial peripherals. In addition, the CP-118E-A-I and CP-138E-A-I work with PCI Express x1, allowing the boards to be installed in any PCI Express slot.

Intelligent RS-485 for Easy Installation and Troubleshooting (Patent Pending)

Setting up an RS-485 network is relatively straightforward. The challenge comes when the power is turned on and the devices connected to the network start transmitting and receiving data. In most cases, engineers will need to further tune the system by configuring pull high/low resistors and terminators at strategic points along the network. Moxa's new Intelligent RS-485 technology supports two essential features to make it easy: (1) One-Click Installation automatically analyzes the network topology and then adjusts terminators and pull high/low resistors. (2) One-Click Troubleshooting tells you what to change to make a deficient network viable.

Specifications

Hardware
Comm. Controller: 16C550C compatible
Bus: PCI Express x1
Connector: DB78 female

Serial Interface
Number of Ports: 8
Serial Standards:
CP-118E-A-I: RS-232/422/485
CP-138E-A-I: RS-422/485
Max. No. of Boards per PC: 4

Serial Line Protection
ESD Protection: 15 kV on the board
Surge Protection: 4 kV
Electrical 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

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

Operating Systems
Windows Real COM Drivers: Windows 2000/XP/2003/Vista/2008/7/8/8.1 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64)
Fixed TTY Drivers: QNX 6, SCO OpenServer, UnixWare 7, Solaris 10 (x86/x64)
Linux Real TTY Drivers: Linux 2.4.x, 2.6.x, 3.x
Note: Please refer to Moxa's website for the latest driver support information.

Physical Characteristics
Dimensions: 109.5 x 130 mm (4.31 x 5.11 in)

Environmental Limits
Operating Temperature: 0 to 55°C (32 to 131°F)
Storage Temperature: -20 to 85°C (-4 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.

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: CP-118E-A-I: 152,124 hrs
CP-138E-A-I: 221,331 hrs
Database: Telcordia (Bellcore), GB

Power Requirements

Power Consumption:
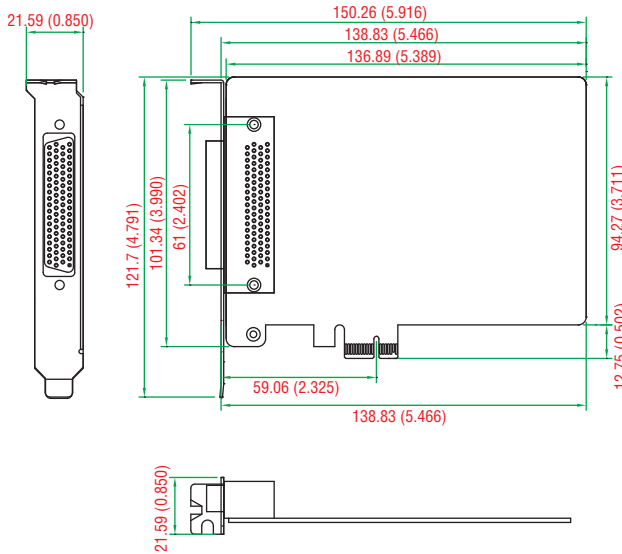CP-118E-A-I: 2,356 mA @ 3.3 V
CP-138E-A-I: 2,356 mA @ 3.3 V

Warranty

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

Dimensions

Unit: mm (inch)

CP-118E-A-I/CP-138E-A-I

: Ordering Information

Available Models

CP-118E-A-I: 8-port RS-232/422/485 PCI Express x1 serial board w/ surge protection and electrical isolation
CP-138E-A-I: 8-port RS-422/485 PCI Express Smart x1 serial board w/ surge protection and electrical isolation
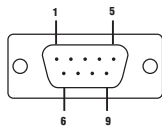
Package Checklist

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

CBL-M78M9x8-100

DB9 male

CBL-M78M25x8-100

DB25 male

MOXA®