



# CP-118U, CP-138U Series Serial Boards Quick Installation Guide

Sixth Edition, May 2009

## 1. Overview

The CP-118U and CP-138U series are Universal PCI multiport serial boards that are designed for POS and ATM applications and for industrial automation systems. Each board has a 128-byte Tx/Rx FIFO, on-chip hardware and software flow control, and supports data transmission speeds of up to 921.6 Kbps.

The CP-118U and CP-138U series Universal PCI serial boards include the following models:

**CP-118U:** 8-port RS-232/422/485 Universal PCI serial board, 0 to 55°C operating temperature.

**CP-118U-T:** 8-port RS-232/422/485 Universal PCI serial board, -40 to 85°C operating temperature.

**CP-118U-I:** 8-port RS-232/422/485 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:** 8-port RS-422/485 Universal PCI serial board, 0 to 55°C operating temperature.

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

## 2. Package Checklist

Before installing the board, verify that the package contains the following items:

- CP-118U or CP-138U series Universal PCI board
- Document and Software CD-ROM
- Quick Installation Guide
- 5-year Product Warranty Statement

P/N: 1802001182025

Please notify your sales representative if any of the above items are missing or damaged.

## 3. Hardware Installation Procedure

The serial board MUST be installed in the PC before you install the driver.

**STEP 1:** Power off the PC.

**STEP 2:** On the serial board, select the serial interface using the DIP switches as shown below:

Mode	S1	S2	S3*
RS-232*	---	---	ON
RS-422	---	ON	OFF
4-wire RS-485	ON	OFF	OFF
2-wire RS-485	OFF	OFF	OFF

\*CP-118U / CP-118U-I only

**STEP 3:** Plug the board firmly into an open PCI or PCI-X slot on the PC.

**STEP 4:** Use the screw to secure the control board into place.

**STEP 5:** Attach the connection cables.

**STEP 6:** Power on the PC. The BIOS will automatically set the IRQ and I/O address.

## 4. Software Installation

Do NOT install the driver until you have physically installed the board. Please refer to the previous section for instructions on installing the board in your PC. In this QIG, we describe Windows 2003 and XP (32-bit/64-bit) installation. For other operating systems, please refer to the Universal PCI User's Manual for detailed instructions.

### Windows 2003 and XP (32-bit/64-bit)

1. Windows 2003/XP will automatically detect the serial board when you turn on your PC.
2. Insert the Document and Software CD in your CD-ROM drive.
3. Select **Install from a list or specific location (Advanced)**.
4. Select **Search for the best driver in these locations** as well as **Include this location in the search** and then click **Browse**.
5. For 32-bit (x86) systems, select the \CP-118U Series\Software\Windows XP\_2003\x86 folder on the CD. For 64-bit (x64) systems, select the \CP-118U Series\Software\Windows XP\_2003\x64 folder on the CD. Click **Next** to continue.
6. If you see a warning about the software not passing the Windows Logo testing, ignore and select **Continue**.
7. After the driver software has been installed, the installation wizard will guide you through the port installation, starting with port 0.

8. To verify the installation, use Windows Device Manager and check "multi-port serial adapters and ports" (COM & LPT) for special marks such as a question mark or an exclamation mark.

### Linux (32-bit/64-bit)

Ensure that you are logged into the machine with superuser (root) privileges. Insert the Moxa driver CD-ROM into the CD-ROM drive.

If necessary, use the **mkdir** command to create a mount point for the CD-ROM. The following command creates a mount point in the directory /cdrom; you can mount the CD-ROM at any location in the machine's local file system.

### mkdir /cdrom

The commands in the steps below assume the CD-ROM is mounted at /cdrom. If you mount the CD-ROM at a different location, use that location when issuing commands.

Mount the CD-ROM drive by entering the following command:

**# mount -t iso9660 -o ro /dev/cdrom /cdrom**

1. Execute the following commands from the Linux prompt:

```
#mount /dev/cdrom /mnt/cdrom
#cd /
#mkdir moxa
#cd moxa
#cp /mnt/cdrom/<driver directory>/mxser.tgz .
#tar xvfz mxser.tgz
#cd mxser
#make clean; make install
#cd /moxa/mxser/driver
#./msmknod
#modprobe mxser
```

2. Use the Moxa diagnostic utility to verify the driver status:

```
#cd /moxa/mxser/utility/diag
#./msdiag
```

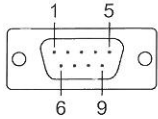
3. Use the Moxa terminal utility to test the TTY ports:

```
#cd /moxa/mxser/utility/term
#./msterm #./msterm
```

5. Pin Assignments and Cable Wiring

The CP-118U and CP-138U each have a female DB62 connector on the board. The CP-118U-I and CP-138U-I each have a female DB78 connector. Cables with different connectors are available to help you connect your device to the board.

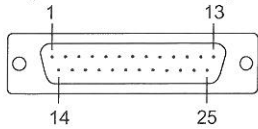
Male DB9  
(CBL-M62M9x8-100, Opt8-M9)  
(CBL-M78M9x8-100)



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	---	---

\*CP-118U/CP-118U-I only

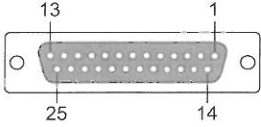
Male DB25  
(CBL-M62M25x8-100, Opt8B)  
(CBL-M78M25x8-100)



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)

\*CP-118U/CP-118U-I only

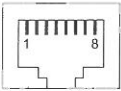
Female DB25 (Opt8A/S)



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

\*CP-118U only

RJ45  
(Opt8-RJ45)



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

\*CP-118U only

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