

MOXA[®]

CP-102U/UL Smart Serial Board

Quick Installation Guide

Fourth Edition, June 2008

1. Overview

Moxa's CP-102U/UL is a 2-port RS-232 Universal PCI serial board that is ideal for connecting a wide range of serial devices—including terminals, modems, printers, scanners, cash registers, bar code readers, keypads, numeric displays, electronic scales, and data acquisition equipment—to a PC. The board's device drivers make full use of the 128-byte Tx/Rx FIFO and on-chip H/W and S/W flow control, which allow data transmission at speeds of up to 921.6 Kbps.

CP-102U/UL is a MOXA Green Product. Moxa's Green Products satisfy the RoHS directive of the European Parliament, and accordingly, do not contain cadmium and cadmium compounds, hexavalent chromium compounds, lead and lead compounds, mercury and mercury compounds, PBBs (polybrominated biphenyls), or PBDEs (polybrominated diphenyl ethers).

2. Package Checklist

Before installing the CP-102U/UL board, verify that the package contains the following items:

- 1 CP-102U or CP-102UL 2-port serial board
- Documentation and Software CD, which contains drivers for Windows 2000/XP/2003, Windows NT, Windows 95/98, DOS, FreeBSD, SCO, and Linux.
- CP-102U/UL Quick Installation Guide

Notify your sales representative if any of the above items is missing or damaged.

3. Hardware Installation Procedure

The CP-102U/UL board **MUST** be plugged into the PC before the driver is installed. Follow these steps to install the board in the PC.

STEP 1: Power off the PC.

STEP 2: Plug the CP-102U/UL control board firmly into an open PCI or PCI-X slot.

STEP 3: Fasten the holding screw to fix the control board in place.

STEP 4: Connect the connection cable to CP-102UL.

STEP 5: Power on the PC; the BIOS will automatically set the IRQ and I/O address.

4. Software Installation Information

The board **MUST** be plugged in before installing the driver. See the previous section for instructions on how to install the board in your PC. Refer to the CP-102U/UL User's Manual for detailed instructions on installing the drivers for this board.

P/N: 1802001023200

Windows 2003/XP Driver Installation

1. After powering on your PC, Windows 2003/XP will automatically detect the CP-102U/UL board.
2. Insert the CP-102U/UL software CD in your CD-ROM drive.
3. Select **Install from a list or specific location (Advanced)**.
4. After selecting **Search for the best driver in these locations**, check the **Include this location in the search** checkbox, and then use the browse button to navigate to the CD's **CP-102U_UL\Software\Win2K-XP-2003** folder.
5. Click on **Continue Anyway** in response to any warnings that the software hasn't passed Windows Logo testing.
6. After the board has been installed, the installation wizard will guide you through the port installation procedure, starting with port 0.
7. Use the **Device Manager** to check the installation of the board and ports. Click on the + sign next to **Hardware**, and then check under **Multi-port serial adapters and Ports (COM & LPT)**. If there are no warning marks, such as a question mark or exclamation point in front of the board or port icons, examine the **Event Log** to determine what the problem is.

Windows 2000 Driver Installation

1. After powering on your PC, Windows 2000 will automatically detect the CP-102U/UL board.
2. Insert the CP-102U/UL software CD in your CD-ROM drive.
3. Select **Search for a suitable driver for my device (recommended)**.
4. In **Optional search location**, checkmark **specify a location**. Navigate to the **\CP-102U_UL\Software\Win2K-XP-2003** folder on the software CD.
5. Click on **Continue Anyway** in response to any warnings that the software hasn't passed Windows Logo testing.
6. After the board has been installed, the installation wizard will guide you through the port installation procedure, starting with port 0.
NOTE: Be sure to install the software from the CD's **\CP-102U_UL\Software\Win2K-XP-2003** folder.
7. Use the **Device Manager** to check the installation of the board and ports. Click on the + sign next to **Hardware**, and then check under **Multi-port serial adapters and Ports (COM & LPT)**. If there are no warning marks, such as a question mark or exclamation point in front of the board or port icons, examine the **Event Log** to determine what the problem is.

Windows 95/98 Driver Installation

1. After powering on your PC, Windows 95/98 will automatically detect the CP-102U/UL board.
2. Insert the CP-102U/UL software CD in your CD-ROM drive.
3. There are some differences between the installation procedures for Windows 95 and Windows 98. However, in both cases, be sure to install the driver from the CD's **CP-102U_UL\Software\Win9x\Windows.95** folder.

4. After the board has been installed, the installation wizard will open the port configuration window.
NOTE: If an error message similar to "CP-102U/UL board (BusNo=x, DevNo=x, Port1=COMx) interrupt number is invalid!" pops up, refer to the "Troubleshooting" chapter of the User's Manual for information on how to handle this error.

Windows NT Driver Installation

1. After powering on your PC, log into NT as **Administrator**.
2. Copy the folder **CP-102U_UL\Software\WinNT\Windows.nt** to your hard drive.
3. Open the **Control Panel**, click on the **Network** icon, and select the **Adapters** tab.
4. Click the **Add** button, and then **Have Disk...** in the **Select Network Adapter** window.
5. Specify the exact path to the folder created in Step 2 above.
6. Select **MOXA Smartio/Industio Family multiport board** in the **Select OEM Option** window, and then click on **OK** to start installing the driver.
7. When the Moxa Smartio/Industio Configuration Panel dialog box appears, click on **Add** to open the **Property** window to modify port settings and advanced FIFO configuration done automatically by the system.

Linux Driver Installation

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
```
2.

```
#cd mxser
#make clean; make install
```
3.

```
#cd /moxa/mxser/driver
#./msmknod
```
4.

```
#modprobe mxser
```
5. Use the Moxa diagnostic utility to verify the driver status:

```
#cd /moxa/mxser/utility/diag
#./msdiag
```
6. Use the Moxa terminal utility to test the tty ports:

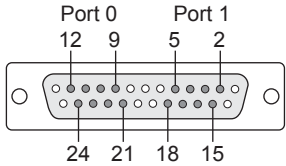
```
#cd /moxa/mxser/utility/term
#./msterm
```

5. Pin Assignments

CP-102UL has one female DB25 connector on the board, and CP-102U has two male DB9 connectors on the board. In this section, we give the on-board connectors' pin assignments, and male DB9 pin assignments for the cable CBL-M25M9x2-50 used with CP-102UL.

Female DB25

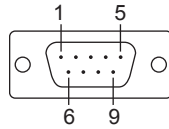
- CP-102UL on-board connector



Pin Number	RS-232 Signals	
	Port 0	Port 1
1	---	---
2	---	DCD
3	---	GND
4	---	CTS
5	---	RxD
6	---	---
7	---	---
8	---	---
9	DTR	---
10	DSR	---
11	RTS	---
12	TxD	---
13	---	---
14	---	---
15	---	DTR
16	---	DSR
17	---	RTS
18	---	TxD
19	---	---
20	---	---
21	DCD	---
22	GND	---
23	CTS	---
24	RxD	---
25	---	---

Male DB9

- CP-102U on-board connector (2 connectors, for Ports 0 and 1)
- Device-side connector for cable CBL-M25M9x2-50 (for use with CP-102UL)



Pin Number	RS-232 Signals
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	---

MOXA[®]

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